THE LOTTERY

Massachusetts State Lottery Commission

The Potential Impact Of Water-based Gaming in Massachusetts

Confidential

Deloitte & Touche

December 3, 1993

Forward

We are pleased to present this financial analysis report to the Massachusetts State Lottery Commission. This report summarizes the findings of our analysis of the potential impact of water-based gaming in Massachusetts.

This report is limited to use by the Massachusetts State Lottery Commission in formulating strategy and policy. This report may not be used for reference in any official statement, financing document, or other similar agreement or document.

In addition, we have not examined, compiled or performed agreed upon procedures on these financial projections, as defined by the American Institute of Certified Public Accountants (AICPA). We therefore, express no assurance of any kind on them.

Further, there will usually be differences between the projected results and actual results, because events and circumstances frequently do not occur as expected and those differences may be material.

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I. Executive Summary

A. Introduction

Recently, various legislation has been proposed in the Commonwealth of Massachusetts to enable harbor-cruise, riverboat or dockside gaming. In evaluating the potential for this type of gaming, the Massachusetts State Lottery Commission has retained Deloitte & Touche to perform an analysis of the potential impact of water-based gaming in Massachusetts.

Water-based gaming is currently legal in Iowa, Illinois, Indiana, Louisiana, Mississippi, and Missouri. State-regulated land based casinos currently exist in Nevada, New Jersey, and Colorado. States with land based casinos on Indian reservations include Minnesota, Connecticut, Nebraska, and South Dakota. At this time, only Iowa and Illinois have riverboat gaming in operation. Mississippi has implemented dockside gaming operations, which are 24 hour casinos built on barges. These operations are more similar to land-based casinos than riverboats, in that patrons may enter and leave at any time, no admission is charged, and there is no limit on duration. Indiana, Louisiana and Missouri have only recently passed enabling legislation and do not have any ongoing operations. The U.S. water-based gaming industry is expected to continue to expand as more states begin considering enabling legislation.

This study estimates the impact of the introduction of water-based gaming operations in Massachusetts, in terms of:

- Total potential market for water-based gaming
- Potential employment and tax revenue due to water-based gaming
- Impact of water-based gaming on other gaming and wagering in Massachusetts

These estimates represent aggregate levels, based on the state as a whole. More detailed estimates, based on site-specific information were not within the scope of this study. The study does not estimate other economic impacts, such as increased spending and employment at retail establishments, hotels, restaurants, and other tourist attractions within Massachusetts.

B. Methodology and Activities Performed

A market-based approach was used in performing this study. Attendance and direct spending at existing locations was used to calculate the market potential for water-based gaming in Massachusetts. Direct employment at existing operations was used to calculate the direct employment as a result of the operations. In applying this methodology and approach, the following activities were performed:

- Conducted personal and telephone interviews with management of gaming, pari-mutuel wagering, and lottery commissions in Massachusetts, New England, and other states.

- Analyzed and identified spending patterns and historical trends associated with gaming and wagering in Massachusetts, New England, and these other states.

- Developed market demand analyses and estimates for water-based gaming in Massachusetts.

- Developed economic impact analyses and estimates for water-based gaming in Massachusetts, including direct spending, employment, and tax revenue, as well as impact on other Massachusetts gaming and wagering.

  In developing this economic impact estimate, a market demand analysis was performed to project the potential attendance for water-based gaming in Massachusetts. The level of attendance is the primary determinant of economic impact.

C. Economic Impact

The introduction of water-based gaming in Massachusetts will provide substantial economic benefits to the state in terms of spending, employment, and tax revenues. These estimated market potential and direct economic benefits are:

- **Annual attendance of 5.0 to 6.0 million patrons.** This estimate, based on actual attendance levels in Illinois and Iowa, includes both local patrons and tourists. In Illinois and Iowa, tourists were estimated to represent up to 25% of total attendance. Based on this data, as well as general demographic information and the competitive environment, the level of tourist attendance in Massachusetts is estimated to be 25% to 35% of total attendance.

- **Direct spending of $450.0 to $636.0 million per year**. This estimate includes on-vessel spending for wagering, admission fee, food and beverages, novelties and arcade, as well as parking.

- **Direct employment of 4,600 to 5,500 Full-Time Equivalent employees (FTEs).** This estimate is based on the employment levels and attendance at existing water-based gaming operations Illinois and Iowa. In these states, employment of 664 to 1,185 FTEs per million patrons annually was realized.

- **Direct fees of $77.8 to $98.2 million per year.** This is based on a 20% gaming fee, a $1 per patron state revenue component of the admission fee, and a 5% sales tax on retail purchases.

This level of attendance could be serviced by six to eight vessels with gaming capacity of 800 to 1,000 patrons. Based on four cruises per day and 325 operating days per year, this would provide a vessel capacity of 1.04 to 1.30 million patrons per year. These estimates result in an estimated capacity utilization of between 48% and 96%, which is similar to those experienced in Illinois.

C. Economic Impact

However, it is unclear the degree to which water-based gaming will impact existing gaming and wagering in Massachusetts. It is likely that there will be some shift in spending from lottery and pari-mutuel racing to the new water-based gaming operations. The level of impact, however, is difficult to estimate due to several factors, including the unknown impact on illegal gaming and the continued growth in lottery sales, which may hide any cannibalization. Our analysis estimates a potential impact on lottery sales of 0% to 4%, and a potential impact on pari-mutuel racing handle of 0% to 7%.

Therefore, despite a potential impact on other gaming products, the net effect of water-based gaming should be an overall increase in direct spending, employment, and tax revenues for Massachusetts. It is important to note that these estimates are based on the existing competitive structure of the gaming and wagering industry. Changes to this structure in the future will affect these estimates.

The success of water-based gaming will be determined by the effectiveness of the implementation. In the short term, benefits will be driven largely by the site selection and regulatory structure. This will include such factors as local population base, existing level of commerce, infrastructure requirements, betting and loss limits, and local and state tax structure. These factors will determine attendance levels and patron spending. Improper site selection and regulatory structure could lead to unprofitable operations, and ultimately an erosion of the entire industry within Massachusetts. This could lead to a substantial shortfall in terms of tax revenues.

C. Economic Impact

Given the small size of New England states, demand for gaming products frequently crosses state borders. Therefore, it is important to consider gaming and wagering trends throughout the entire region to assess the long term viability of water-based gaming in Massachusetts. Historically, the Massachusetts Lottery has surpassed those of other New England states in both revenues and product offering. However, in recent years, its growth has slowed relative to other New England state lotteries, especially Maine and Vermont, who in 1986 teamed up with New Hampshire to offer the first multi-state lottery game. More recently, the Pequot tribe of Connecticut opened the first land-based casino in New England. In comparison to other mature state lotteries, such as New Hampshire and Connecticut, Massachusetts has continued to achieve superior performance in terms of revenue growth.

Given the current economic climate, it is likely that the competition between states for consumers' gaming and wagering spending will increase. Therefore, as the novelty of water-based gaming fades, its success will be driven by the integration of it with other tourist attractions and entertainment facilities. As other states establish comparable gaming operations, the long term success of water-based gaming in Massachusetts will be determined by its ability to attract patrons from other states. Given its abundance of tourist attractions, Massachusetts may have a competitive advantage in this area.

D. Other Water-based Gaming Operations

Riverboat Gaming Operating Characteristics

The success of water-based gaming in Massachusetts will be driven by a variety of factors related to the operating and regulatory structure of the operation. The following is an overview of some of these factors for those states which have passed enabling legislation.

State	Date Implemented	No. of Boats Operating	Projected Annual Attendance	Projected Annual Adjusted Gross Revenues (Millions)	Limitations				Fees	
					Boats	Licenses	Cruises	Betting	State	Local
Iowa	April 1991	4	1.543,991	$46.0	Historic boats. 500 passenger minimum capacity. 30% of sq. footage devoted to gaming.	None. Local approval required.	3 hours during warm season. Dockside during cold season.	$5 betting limit and $200 loss limit per passenger per cruise.	Escalating up to 20% of Adjusted Gross Revenue (AGR).	$0.50 per passenger.
Illinois	Sept. 1991	6	6.612,514	$408.3	500 passenger minimum. Maximum 1.200 gaming positions.	10. None in Cook or Lake Counties.	Maximum of 4 hours.	None.	20% of AGR.	N/A
Mississippi	August 1992	6	NA	NA	Minimum of 150 ft. in length and 200 passenger capacity.	None. Local approval required.	None. Dockside on barges.	None.	Escalating up to 8% of AGR.	4% of AGR. varies by location.
Louisiana	NA	0	NA	NA	Historic boats. maximum gaming space of 30,000 sq. ft. or 60% of total space whichever is less. Minimum capacity of 600 passengers.	15. No more than 6 in any one parish.	Minimum of 3 hours, maximum of 8 hours.	None.	15% of AGR.	$2.50 per passenger
Missouri	NA	0	NA	NA	Historic boats, maximum gaming space of 50% of total space. Minimum dining space of 20% of total space. 500 passenger minimum capacity.	None. Local approval required.	Cruises during warm season. Dockside during cold season. Some dockside year round in St. Louis.	$500 loss limit per passenger per cruise.	Escalating up to 20% of AGR.	Varies by location.
Indiana	NA	0	NA	NA	Ohio River boats must be historic.	11.	None.	None.	2% of AGR	Varies by location.

Source: Interviews with various state gaming commissions industry sources.

II. Massachusetts Gaming and Wagering

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A. Overview of Massachusetts Gaming and Wagering

There are four types of legal gaming and wagering products currently offered in Massachusetts.

- Pari-Mutuel Horse Racing
- Pari-Mutuel Greyhound Racing
- Lotteries
- Charitable Gaming

This section provides a historical overview of the performance of each of these gaming products. The historical impact of new gaming products is also provided.

Below is a glossary of the terminology unique to the gaming and wagering industry that is used throughout this document.

- **Legal Gaming Handle** - Total spending on legal forms of gaming
- **Pari-Mutuel Racing Handle** - Total amount bet on racing by patrons
- **Pari-Mutuel Racing Takeout** - Amount of handle not returned to the patrons and retained by racetracks for expenses, capital costs, purses, and taxes
- **Lottery Sales (Gross Revenues)** - Amount spent purchasing lottery tickets before prizes and expenses are deducted
- **Casino Drop** - Total amount of cash and cash equivalents exchanged for gaming chips
- **Casino Win (Adjusted Gross Revenues)** - Amount won by the casino from patrons before expenses are deducted

B. Massachusetts State Lottery

Historical Overview

The Massachusetts State Lottery sold its first ticket in 1972. Since its inception, it has developed a reputation as one of the most innovative state lotteries in terms of marketing, product development, and technology. As a result, it is considered one of the most successful lotteries in the nation, and is first in terms of per capita sales.

The following is a synopsis of major events in the Lottery's history:

1972 Massachusetts State Lottery begins. Its first product, "The Game", is a weekly drawing patterned after a successful New Jersey Lottery game.

1974 Massachusetts State Lottery introduces the first instant game in America.

1976 The Daily Numbers Game is introduced. It is the first game which allows the players to select their own numbers.

1982 Massachusetts State Lottery introduces Megabucks, its first lotto game. The product provides sizeable jackpots, as well as a variety of smaller prizes.

1987 Mass Millions is introduced, the Lottery's second lotto game. The product consistently provides multi-million dollar jackpots.

1991 Mass Cash is introduced, the Lottery's third lotto game. The product offers more prizes than Megabucks, but a smaller jackpot.

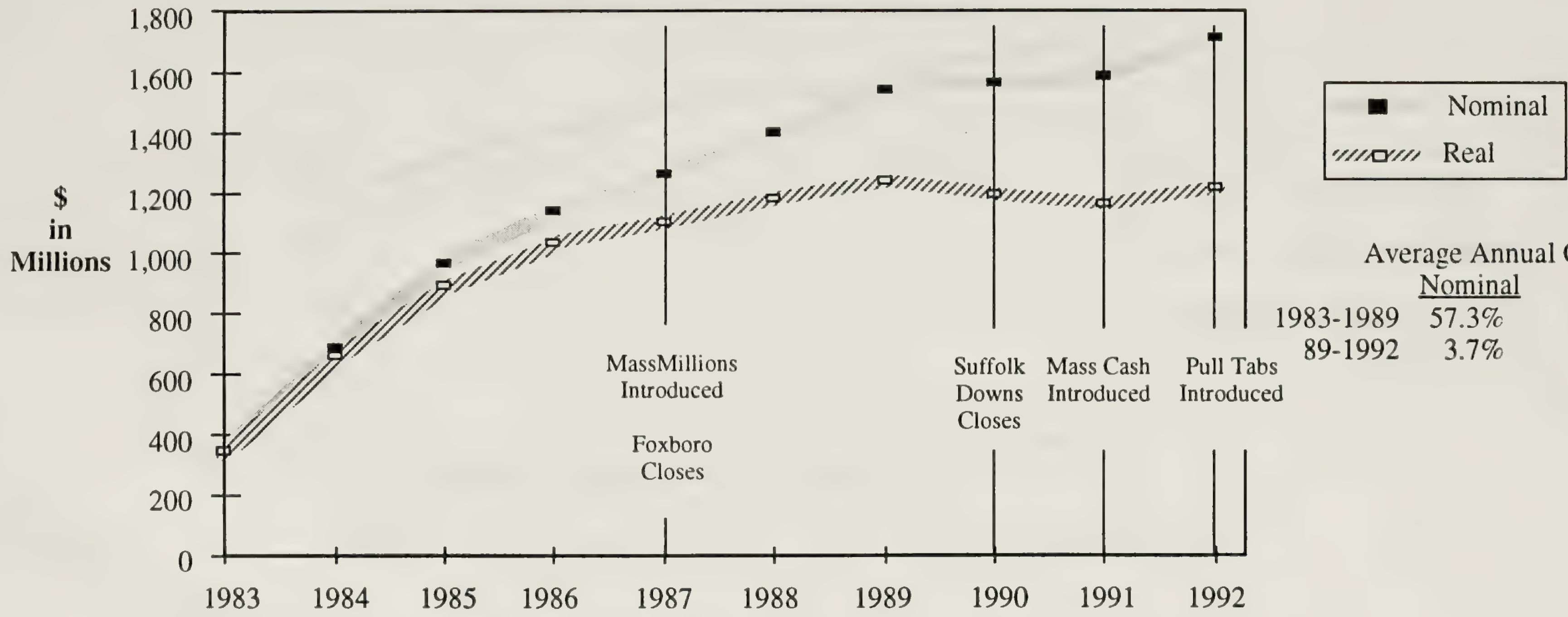
1992 Massachusetts State Lottery introduces Pull-Tabs, its first game aimed primarily at patrons of pouring establishments.

B. Massachusetts State Lottery

Nominal vs. Real Sales

From 1983 to 1989 lottery sales experienced dramatic growth, with an average growth rate of 57.3%. In 1989, however, the Lottery began to exhibit signs of maturing, as nominal sales growth slowed and real sales declined slightly. However, the recent introduction of new products has provided a boost in both real and nominal sales during 1992.

Massachusetts State Lottery Sales



Average Annual Growth

	Nominal	Real
1983-1989	57.3%	42.7%
89-1992	3.7%	(0.6%)

Source: Massachusetts State Lottery

Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

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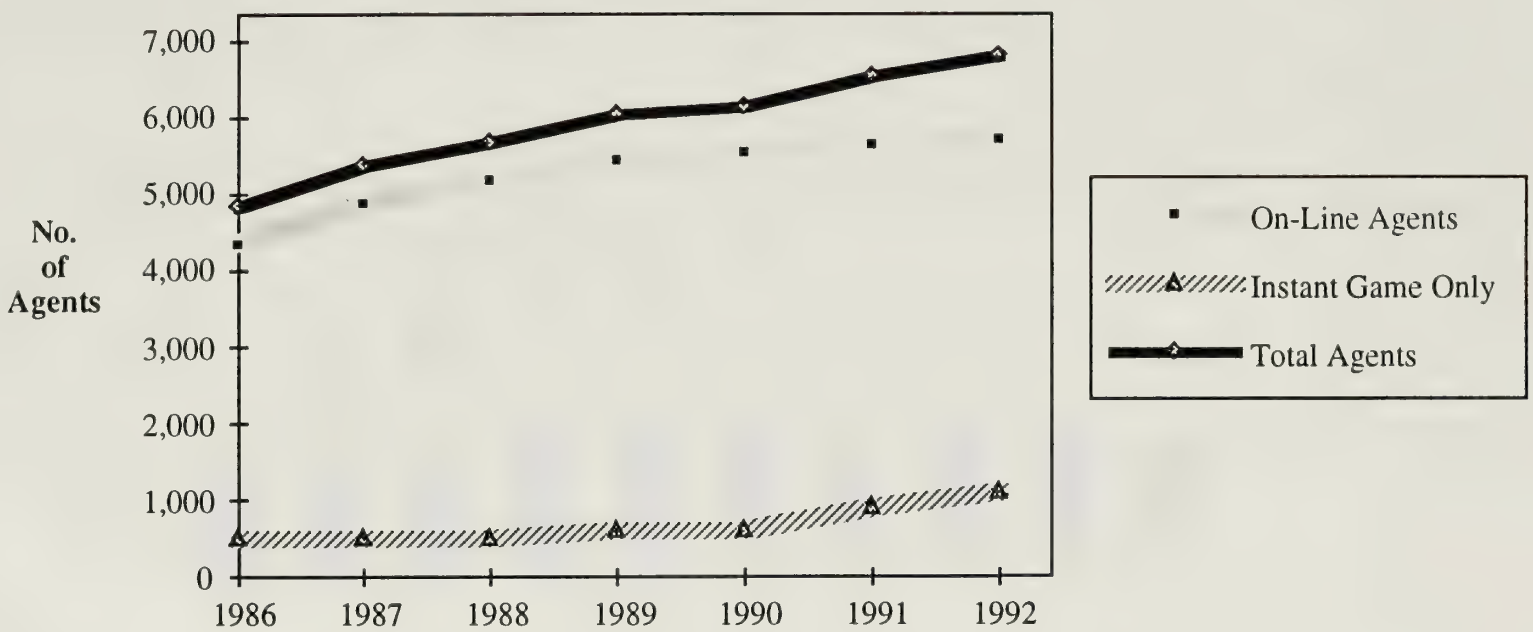
B. Massachusetts State Lottery

Total Lottery Agents

The number of lottery agents in Massachusetts has increased steadily since 1986. While the vast majority of agents offer both on-line and instant game tickets, there has recently been an increase in instant game only agents.

Massachusetts Lottery Agents



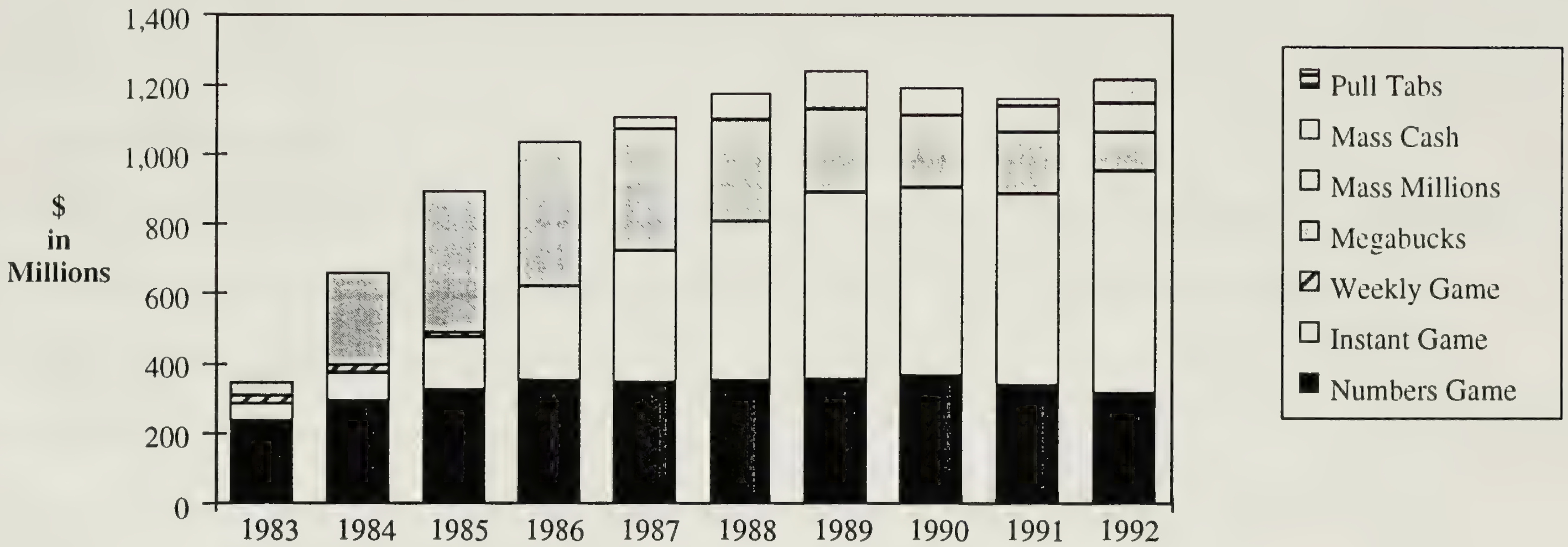
Source: Massachusetts State Lottery
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

B. Massachusetts State Lottery

Impact of New Products

The introduction of new lottery games in Massachusetts has contributed significantly to the overall sales growth, with little apparent cannabalization of other lottery products. The introduction of Megabucks in 1982 directly impacted the growth in lottery sales through the 1980's. As Megabucks growth slowed, the introduction of Mass Millions again increased sales. The lottery has successfully introduced new products, as existing products reach the end of the product lifecycle.

Real Lottery Sales by Product



Source: Massachusetts State Lottery

Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

C. Massachusetts Pari-Mutuel Horse Racing

Historical Overview

Horse Racing was legalized in Massachusetts in 1934. The following is a synopsis of major structural and regulatory events in Massachusetts pari-mutuel horse racing history:

1934 Legislation enacted enabling pari-mutuel racing in Massachusetts.

1935 Suffolk Downs opens.

1940 Raynham Park opens.

1948 Foxboro Raceway opens.

1981 Legislation provides for 1,590 annual days of racing, transforming the industry from seasonal to year round.

1985 Suffolk Downs ownership shifts from Ogden Suffolk Downs, Inc. to New Suffolk Downs Corp.

1987 Foxboro Raceway discontinues operations.

1990 Suffolk Downs discontinues operations.

1992 Suffolk Downs re-opens with live racing. Simulcasting initiated at Suffolk Downs and Foxboro. Raynham Park renovations completed.

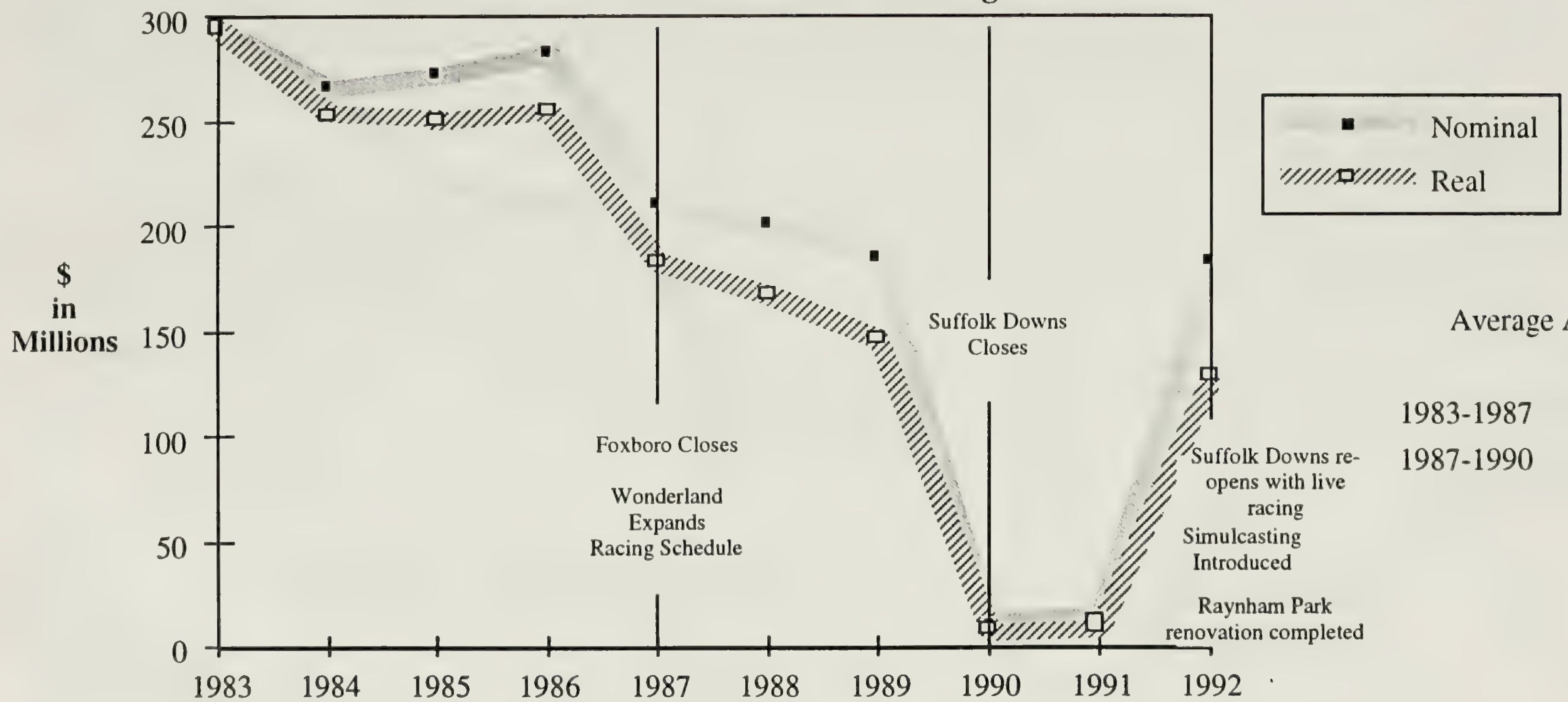
Source: Massachusetts Racing Commission

C. Massachusetts Pari-Mutuel Horse Racing

Nominal vs. Real Handle

Massachusetts horse racing handle has declined significantly since the early 1980's. From 1983 to 1987, nominal handle declined at a 7.2% annual rate, from $293 million to $210 million. From 1987 to 1991, the closing of Foxboro and Suffolk Downs virtually eliminated horse racing in Massachusetts. The introduction of simulcasting in 1992 was a significant step in raising racing handle to 1989 levels.

Massachusetts Pari-Mutuel Horse Racing Handle



Average Annual Growth

	Nominal	Real
1983-1987	(7.2%)	(9.4%)
1987-1990	(31.5%)	(31.7%)

Source Massachusetts Racing Commission

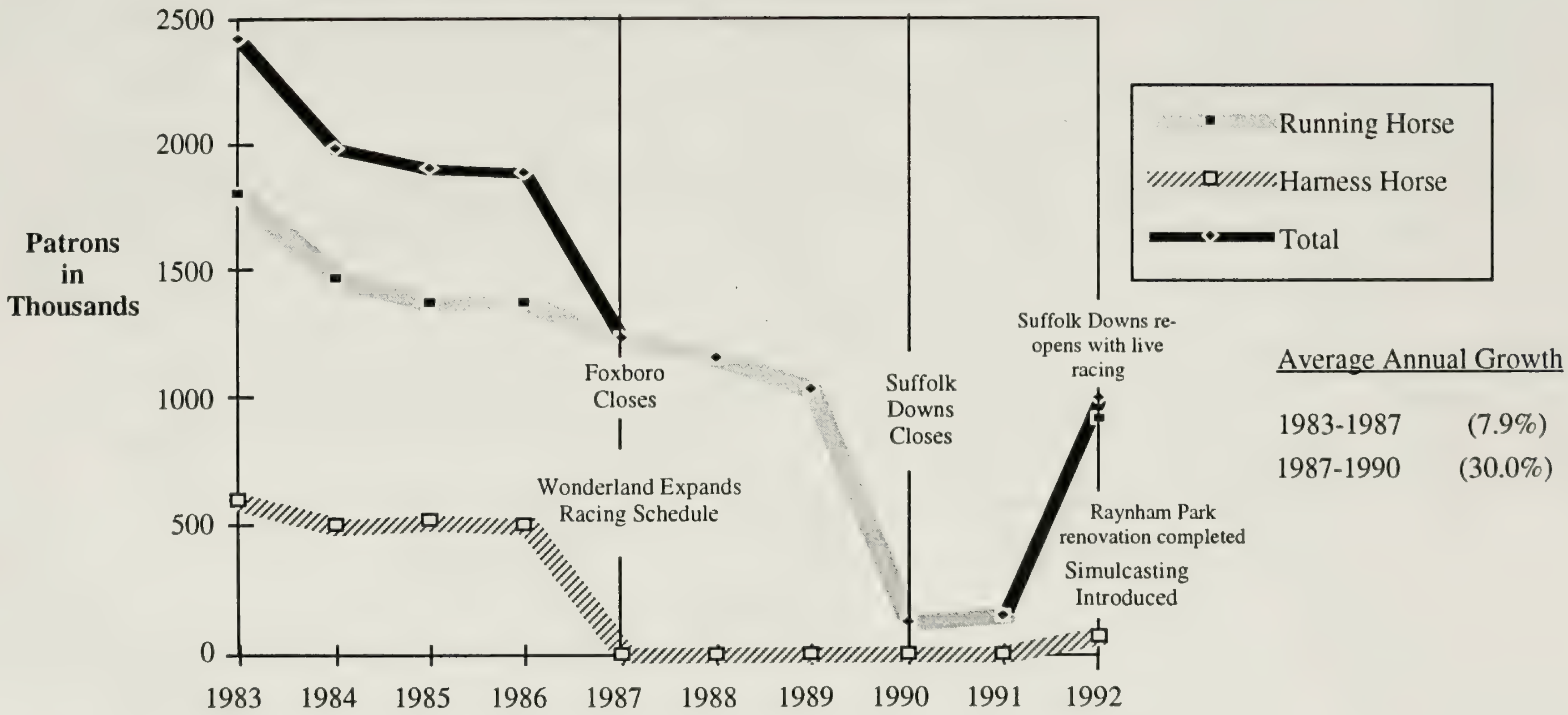
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

C. Massachusetts Pari-Mutuel Horse Racing

Total Attendance

The decline in horse racing handle is directly attributed to reduced interest in racing as shown by the steady attendance declines. Attendance at both Foxboro and Suffolk Downs declined steadily prior to their closings. The introduction of simulcasting has increased attendance levels to near 1989 levels.

Massachusetts Horse Racing Total Attendance



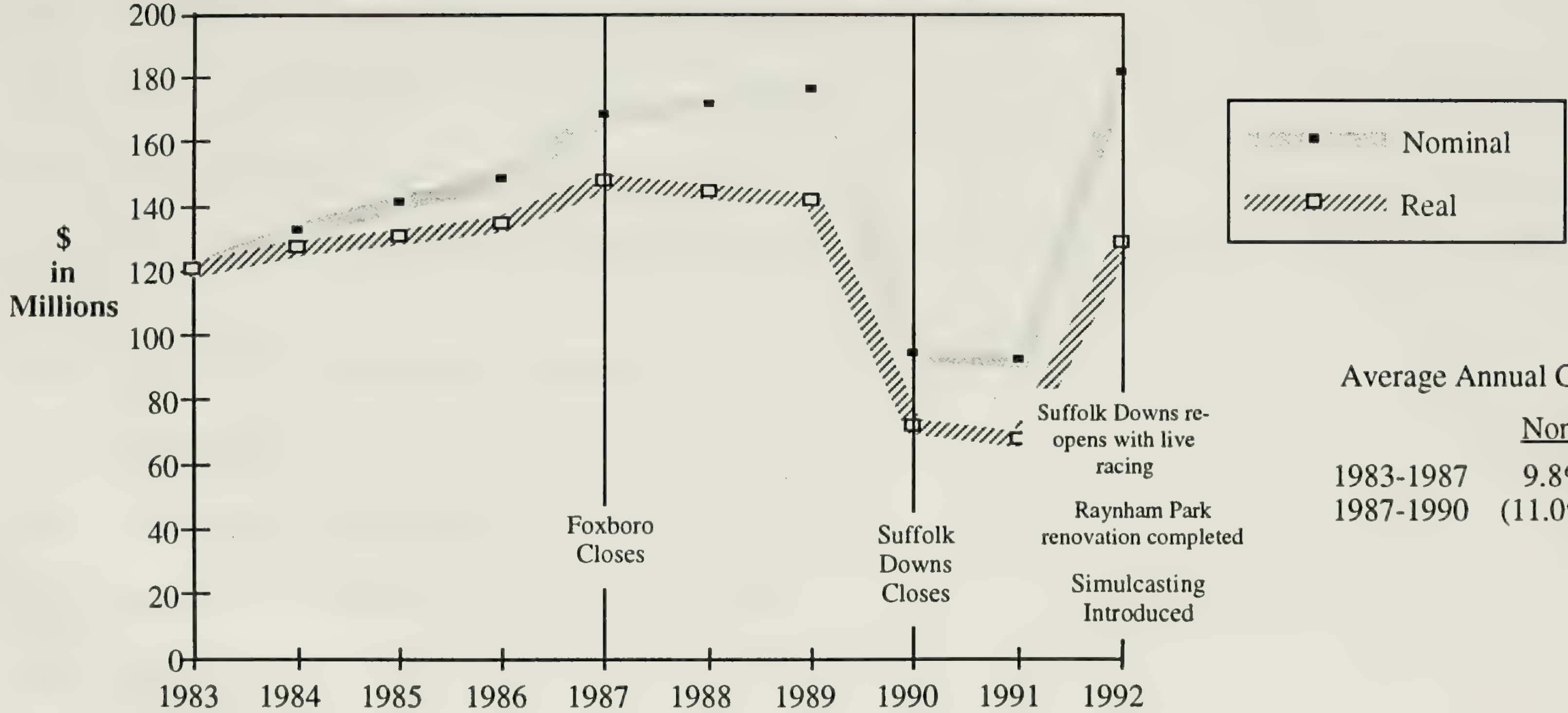
Source: Massachusetts Racing Commission

C. Massachusetts Pari-Mutuel Horse Racing

Nominal vs. Real Per Capita Handle

Although attendance declined steadily in the 1980's, real and nominal per capita handle increased. From 1983 to 1989, nominal per capita handle increased at a 9.8% average annual rate, from $121 to $168. Both real and nominal per capita handle fell dramatically after the closing of Suffolk Downs in 1990. The introduction of simulcasting has increased per capita handle to near 1989 levels.

Massachusetts Horse Racing Per Capita Handle



Average Annual Growth Rate

	Nominal	Real
1983-1987	9.8%	5.5%
1987-1990	(11.0%)	(12.8%)

Source: Massachusetts Racing Commission
Notes: Nominal Dollars Deflated to 1983 Dollars Using the Consumer Price Index

D. Massachusetts Pari-Mutuel Greyhound Racing

Historical Overview

Greyhound Racing has existed in Massachusetts since 1935. Current facilities include Wonderland Park in Revere and Raynham Park/Taunton Dog Track in Raynham.

The following is a synopsis of major structural and regulatory events in Massachusetts Greyhound Racing history:

1934 Legislation enacted enabling pari-mutuel racing in Massachusetts.

1935 Wonderland Park opens.

1940 Raynham Park opens.

1981 Legislation provides for 1,590 annual days of racing, transforming the industry from seasonal to year round.

1986 Wonderland expands racing schedule from 310 to 359 performances.

1986 Wonderland begins major facilities renovation.

1987 Wonderland expands racing schedule from 359 to 460 performances.

1988 Wonderland completes major facilities renovation.

1990 Wonderland expands racing schedule from 460 to 520 performances.

1992 Raynham/Taunton completes major renovation. Now offers dining, as well as live bands and dancing for patrons.

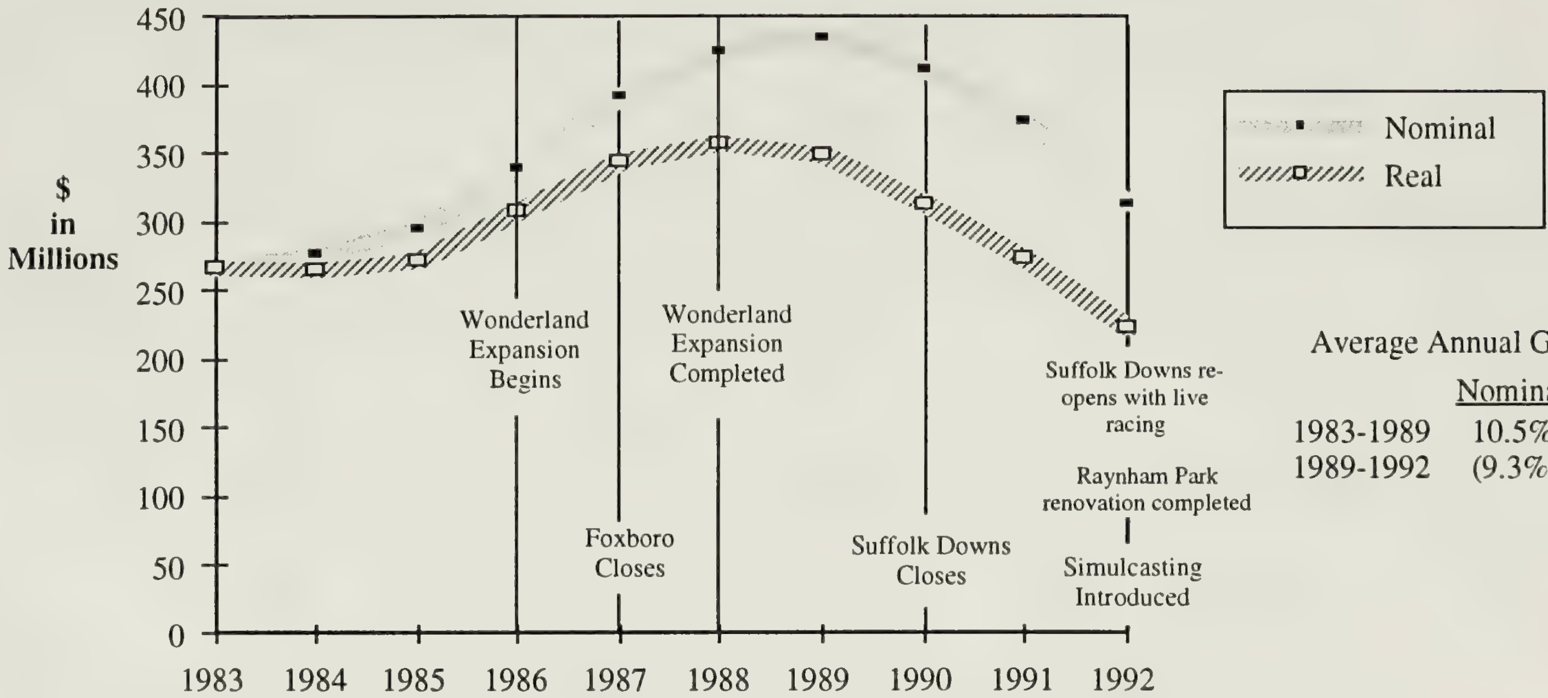
Source: Massachusetts Racing Commission

D. Massachusetts Pari-Mutuel Greyhound Racing

Nominal vs. Real Handle

Greyhound Racing handle grew steadily from 1983 to 1989 at a rate of 10.5% annually, from $266 million to $434 million. This was followed by a brief plateau and decline in handle, to $313 million in 1992.

Massachusetts Pari-Mutuel Greyhound Racing Handle



Average Annual Growth Rate

	Nominal	Real
1983-1989	10.5%	5.1%
1989-1992	(9.3%)	(12.1%)

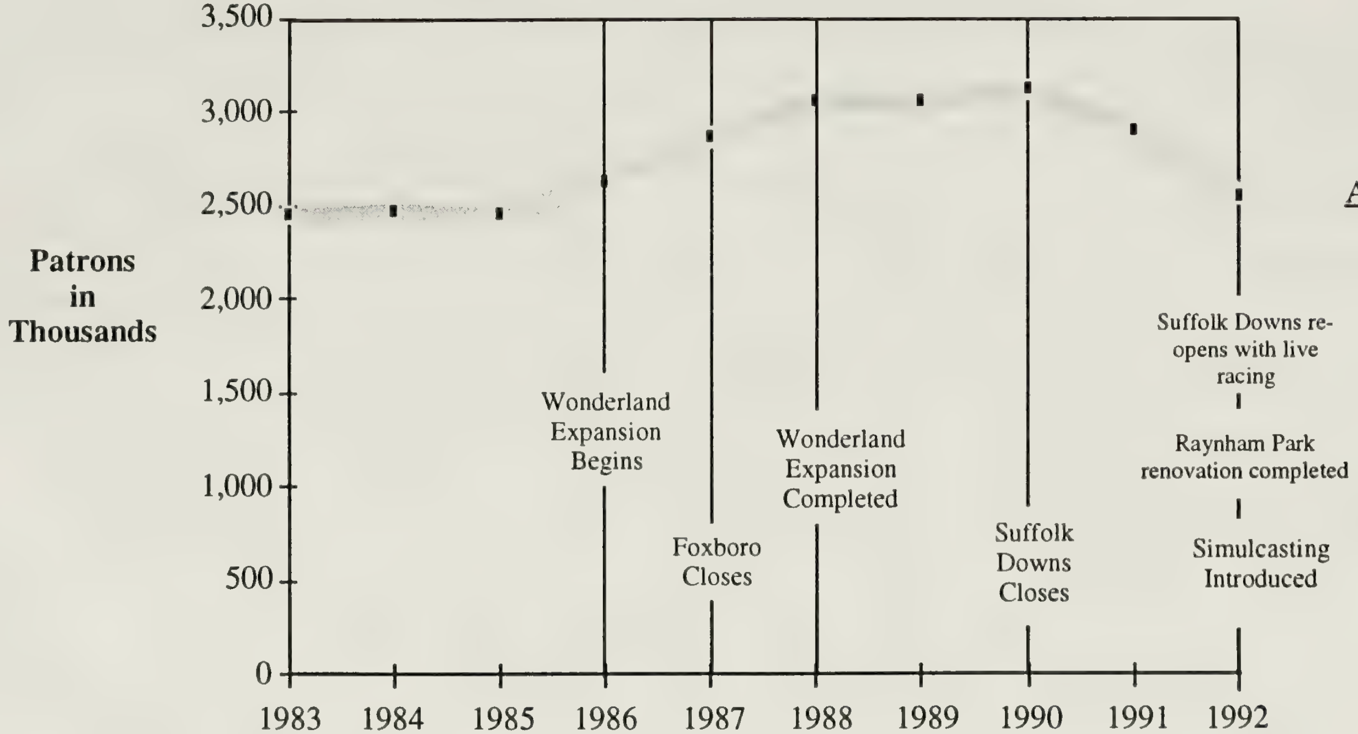
Source: Massachusetts Racing Commission
Notes: Nominal Dollars Deflated to 1983 Dollars Using the Consumer Price Index

D. Massachusetts Pari-Mutuel Greyhound Racing

Total Attendance

Greyhound Racing attendance exhibited steady growth through the mid to late 1980's, reaching a high of 3.1 million in 1990. This growth was attributed to growing interest among patrons, and the closing of Foxboro. The decline in attendance since 1990 was attributed to the general economic problems in Massachusetts.

Massachusetts Pari-Mutuel Greyhound Racing Attendance



Average Annual Growth Rate

1983-1989	4.1%
1989-1992	5.6%

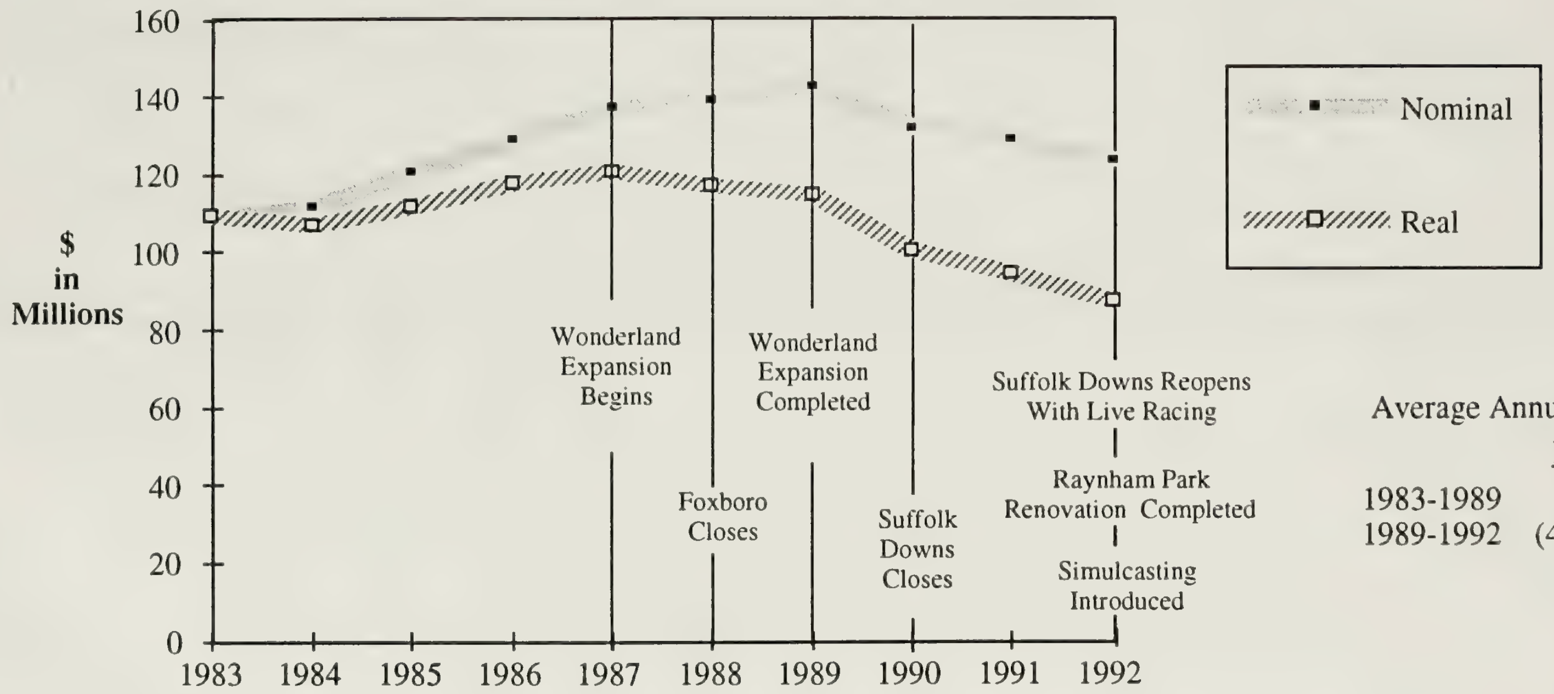
Source: Massachusetts Racing Commission

D. Massachusetts Pari-Mutuel Greyhound Racing

Nominal vs. Real Per Capita Handle

Per capita handle grew steadily from 1983 to 1989, reaching a high of $142 per person. From 1989 to 1992, nominal per capita handle fell at a rate of 4.5% per year to $123 per person.

Massachusetts Pari-Mutuel Greyhound Racing Per Capita Handle



Average Annual Growth Rate

	Nominal	Real
1983-1989	5.1%	0.8%
1989-1992	(4.5%)	(7.8%)

Source: Massachusetts Racing Commission
Notes: Nominal dollars deflated to 1983 dollars using the Consumer Price Index

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E. Charitable Gaming

Overview

In Massachusetts, charitable gaming is administered by the Lottery Commission. Charitable gaming in Massachusetts consists of:

- Beano Games
- Las Vegas Nights
- Casino Nights
- Raffles and Bazaars

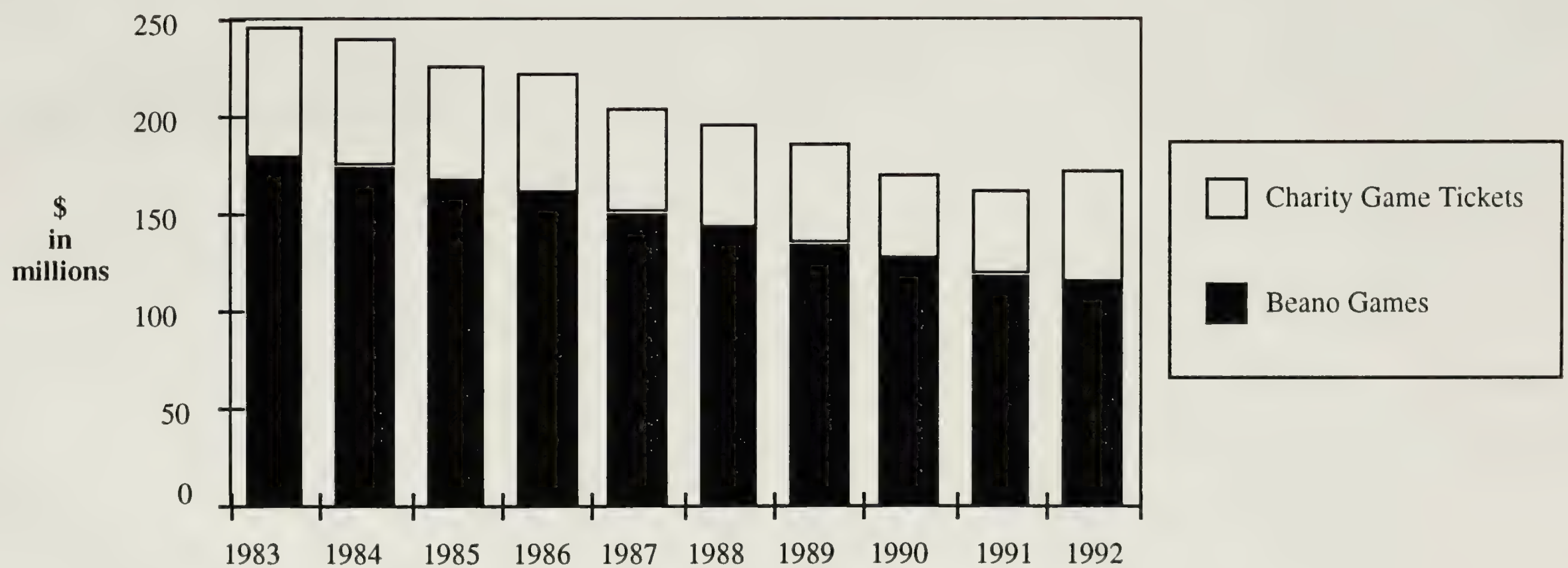
The Lottery is responsible for collecting a 5% tax charged by the Commonwealth on gross receipts of all such annuities. Profits from Beano and charitable game ticket sales are to be used for charitable, religious, or educational purposes.

E. Charitable Gaming

Real Gross Receipts

Beano and charitable game ticket receipts have declined steadily in real terms since 1983. However, a recent increase in real ticket receipts for 1992 is attributed to the sale of Bonus 300 Charity Game tickets. Charity game ticket sales in 1992 were a record high, an increase of $24 from 1991.

Beano and Charity Game Tickets Real Gross Receipts



Source: Massachusetts State Lottery

F. Illegal Gaming

There is little information available which quantifies illegal gaming in Massachusetts. However, law enforcement officials have documented its existence for many years in the form of sports betting, card games, and illegal video and slot machines. Individuals that gamble illegally often do not wish to give up the benefits of illegal gaming, such as:

- No taxation on winnings
- More varied, flexible games
- Typically higher payouts
- Wagering accessible by telephone
- More readily available credit

G. Potential Market for Keno

Keno is a sophisticated Lotto game in which a player typically selects 1 through 15 numbers or "spots" out of a possible 80 on a game card. Anywhere from $1 to $20 can be wagered per game. A computer randomly draws 20 numbers from the same field of 80. Players win cash prizes by successfully matching all or some of his numbers to the winning 20. In other states which offer Keno, drawings are typically held every five minutes for 12 to 16 hours per day. Players can view the winning results immediately on video monitors attached to an agent's terminal.

Massachusetts Keno Implementation Plans

The introduction of enabling legislation for lottery Keno in Massachusetts occurred in 1993. The enabling legislation required that the Lottery Commission file an implementation plan with the State by September 1, 1993 and implement Keno no later than October 1, 1993. The Massachusetts Lottery Commission launched Keno on September 29, 1993 and is proceeding with its plan for state-wide implementation.

G. Potential Market for Keno

Per Capita Spending - Other Locations

An analysis of per capita annual spending on Keno in other jurisdictions appears below:

Location[3]	Date Introduced	FY93 Keno Sales (millions)	Population (millions)[2]	# of Terminals	Sales/ Terminal/ Week	Per Capita Keno Wagering
Oregon	Sept. 1991	$109.8	2.9	2,140	$ 987	$37.86
Rhode Island	Sept. 1992	$ 37.0[1]	1.0	475	$1,498	$37.00
Kansas	Oct. 1992	$ 43.7	2.5	1,200	$ 700	$17.48
California	Nov. 1992	$ 352.5[1]	31.0	7,226	$ 938	$11.37
Maryland	Jan. 1993	$169.7[1]	4.9	1,100	$2,967	$34.63
Average		$142.5	8.5	2,428	$1,418	$27.66

Source: State Lottery Commissions
Notes: (1) Annual sales based on preliminary sales data.
(2) Population data obtained from 1993 Rand McNally Commercial Atlas and Marketing Guide.
(3) Nebraska Keno was implemented on a community basis. Washington Keno has only been in operation since 11/92

Per capita Keno wagering in other states have ranged from $11 to $38. However, per capita sales of $11 to $17 may be unrealistically low, given the track record of successful product introductions by the Massachusetts Lottery. A more reasonable per capita sales range would be $35 to $38, similar to that of Rhode Island, Maryland, and Oregon. This would potentially generate **$210 million to $228 million** in annual sales in Massachusetts.

G. Potential Market for Keno

Impact on Massachusetts Lottery

The introduction of new lottery products in Massachusetts has historically increased total lottery sales with little cannibalization of other lottery products. Keno will represent a new type of lottery game in Massachusetts, unlike any existing gaming and wagering in terms of frequency of drawings and payoff structure. As such, the product will increase the supply of legal gaming and wagering products in Massachusetts.

Experience at Other Locations

As a relatively new game, the impact of Keno at other locations cannot be estimated with great precision. In general, however, Keno has caused minimal cannibalization. As a new type of gaming product, Keno is sold in different types of outlets thereby increasing total distribution points. By extending the time and places for wagering, Keno can grow the entire primary market. The following is a summary of the effects of Keno on Lottery Sales in other states based on interviews with Lottery representatives.

Location	Keno Sales(a) FY 93[1] (millions)	Change In Total Lottery Sales(b) FY 92 to FY 93 (millions)	Change in Sales of Non-Keno Products (b-a) FY 92 to FY 93 (millions)
Oregon[2]	$ 84.2	$121.6	$37.4
Rhode Island	$ 30.8	$ 73.5	$42.7
Kansas	$ 25.5	$ 36.9	$11.4
California	$ 235.0	$400.0	$115.0
Maryland	$ 85.0	$ 70.0	($15.0)[3]
Nebraska[4]	$141.0	$233.9	$92.9
Washington[5]	$10,8	$73.6	$62.8

Source: State Lottery Commissions.
Notes: (1) Or partial year depending on timing of product introduction.
(2) Oregon figures FY92 due to an earlier product launch.
(3) According to Maryland Lottery Commission, decline attributable to a lack of large lotto jackpot.
(4) Nebraska Keno implemented on a community basis, not state-wide.
(5) Estimated. Washington Keno is one drawing per day.

H. Indian Gaming

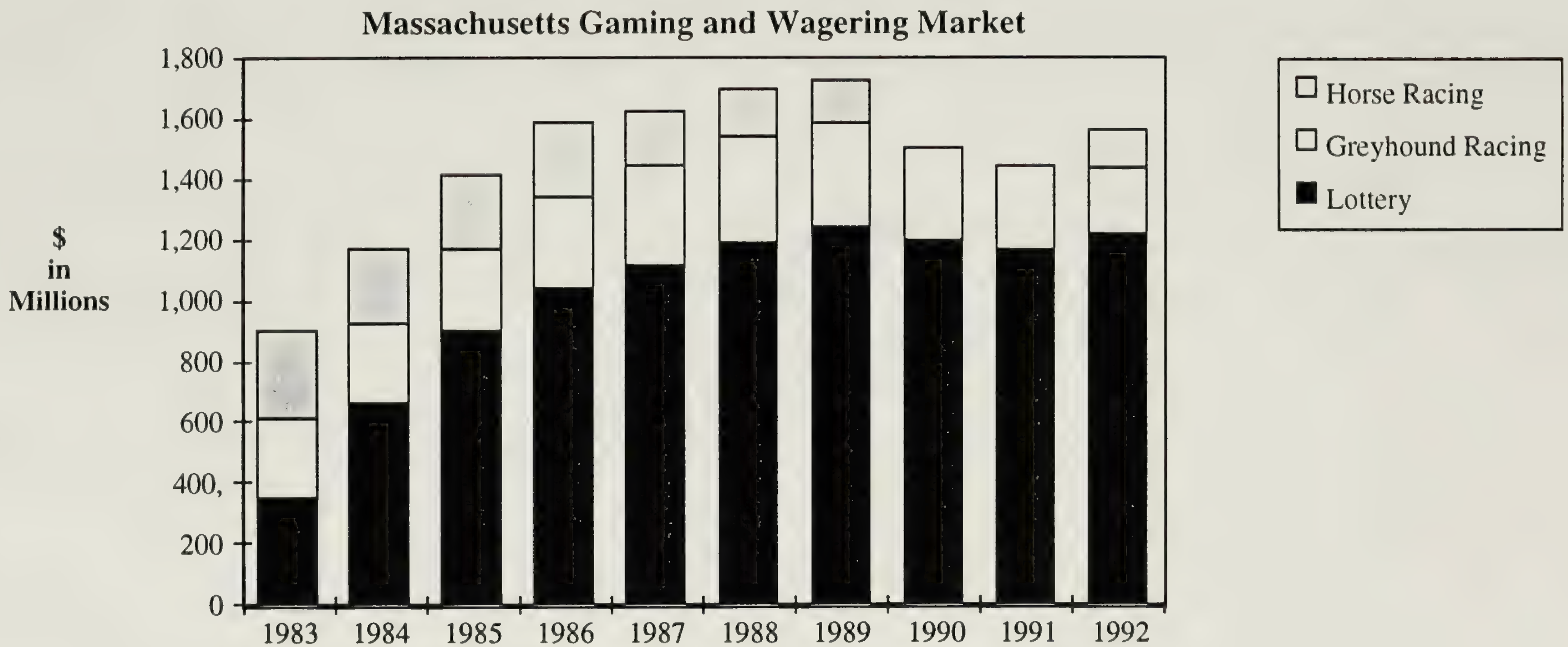
Indian Gaming in Massachusetts

The Wampanoag Indians of Gay Head are currently investigating the possibility of building a land-based casino in Massachusetts. The Indian Gaming Regulatory Act has allowed Indians in other jurisdictions to establish land-based casino operations, such as Ledyard, Connecticut. There is some question as to whether the Wampanoags are covered under this Act. This is an open and controversial issue with an ultimate resolution unknown at this time.

I. Summary

Real Gaming and Wagering By Segment

The strong growth in Masssachusetts gaming and wagering was driven by the success of the lottery throughout the 1980's. However, the maturing of the lottery, and the steady decline of Massachusetts pari-mutuel horse racing has caused a recent decline in real gaming and wagering in Masssachusetts overall. It is difficult to pinpoint the exact cause of this decline but possible factors include the recession, shifts in spending to other entertainment or shifts in spending to illegal gaming.



Source: Massachusetts State Lottery, Massachusetts Racing Commission

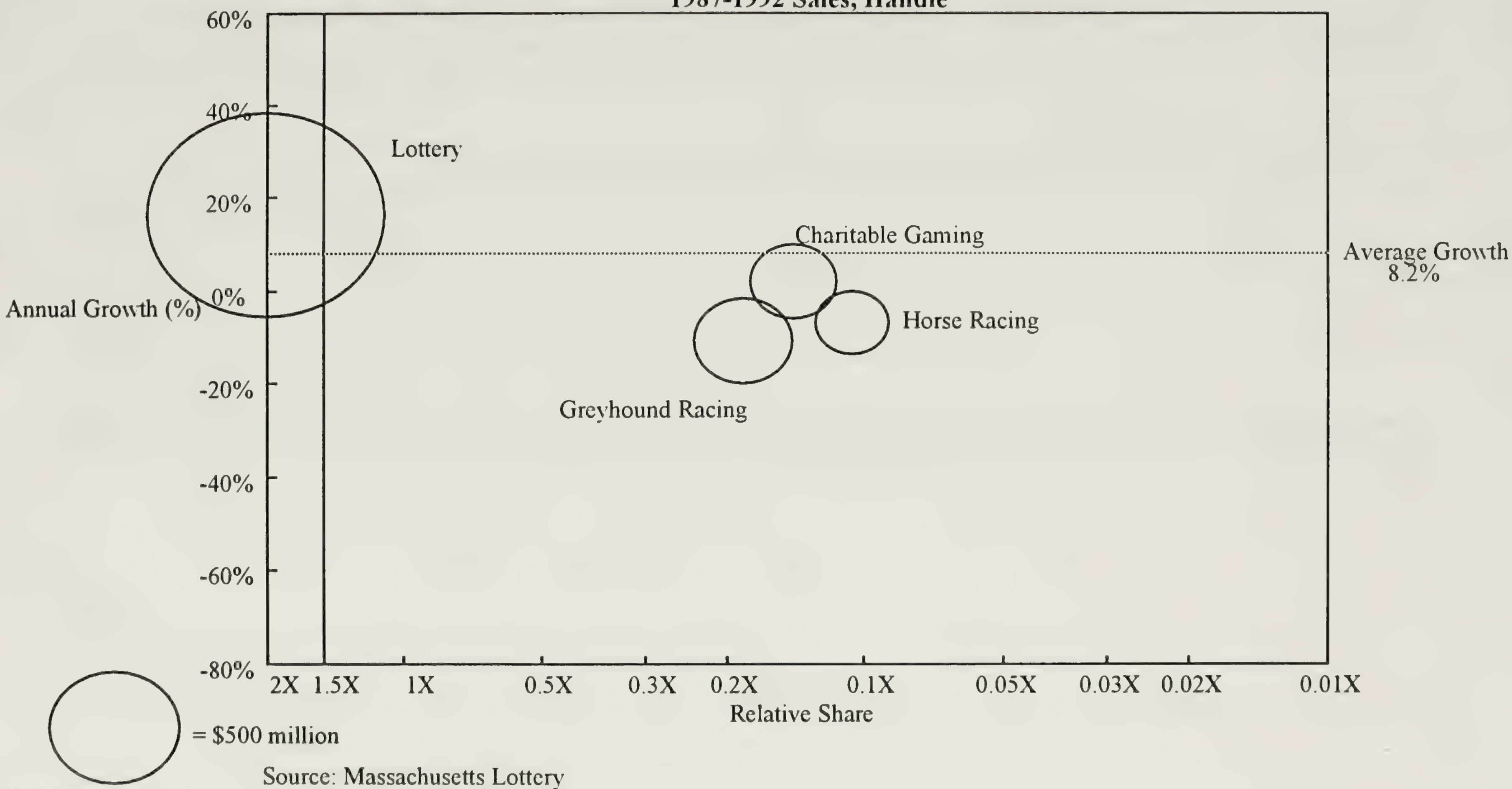
I. Summary

Annual Growth and Relative Market Share

In Massachusetts, lottery sales dominate the gaming and wagering market in terms of revenue growth and relative market share. Although nominal growth in lottery sales has slowed, it has consistently outperformed racing and charitable gaming. This market presence provides the lottery a distinct advantage in terms of new product introduction.

MASSACHUSETTS GAMING AND WAGERING

1987-1992 Sales, Handle



Source: Massachusetts Lottery
Massachusetts Racing Commission

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I. Summary

The four forms of gaming and wagering in Massachusetts have had varying growth rates since 1983.

- Massachusetts Lottery sales exhibited significant growth in both nominal and real terms until 1990. Despite slowing growth of nominal sales, and declining real sales, the Massachusetts Lottery continues to outperform other mature lotteries in terms of growth and per capita sales.
- Pari-mutuel horse racing has suffered greatly during this same period. Shifting demand led to the closing of Foxboro in 1987 and Suffolk Downs in 1990. The introduction of simulcasting in 1992 appears to have resurrected the industry. Long term prospects, however, are questionable.
- Pari-mutuel greyhound racing increased from 1986 to 1990, then recently declined, though not to the extent of horse racing. The continued renovation of Wonderland Park may have contributed to this relatively slower decline.
- Charitable gaming in Massachusetts has declined steadily in real terms since 1983.
- Illegal gaming most certainly exists though its impact is difficult to quantify.

The planned introduction of Keno will have a significant effect on the Massachusetts gaming and wagering market. Based on the experience in other states, Massachusetts lottery sales will increase an estimated $210 to $228 million.

III. New England Gaming and Wagering

A. Overview of the New England Gaming and Wagering

There is a wide variety of gaming products available in New England:

- All states have a lottery.
- All states have some form of legal racing.
- All states permit charitable gaming.
- Connecticut and Rhode Island also have Jai-Alai frontons.

In the late 1980s, consumers began to lose interest in these traditional gaming products. States have since been looking for new ways to keep up their revenues:

- Rhode Island has introduced video poker and Keno.
- Connecticut has permitted its Indian population to establish a land-based casino.

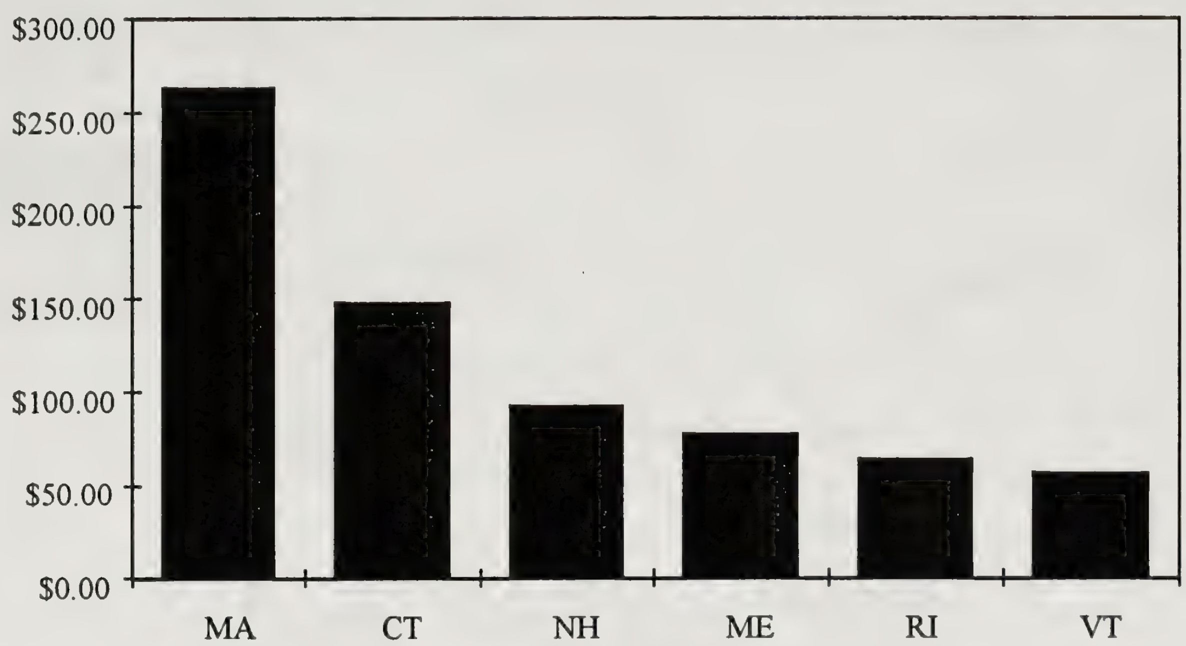
This section analyzes the trends in the New England gaming industry during the last decade. It begins with a comparative summary, followed by a more detailed analysis of the gaming and wagering products in each New England state.

A. Overview of the New England Gaming and Wagering

Lottery

Masssachusetts residents by far outspent the rest of New England on the lottery at approximately $264 per person in 1992. Connecticut is ranked second at $148 per person. The rest of New England spends less than $100, with Vermont the lowest at $57 per person.

Annual Per Capita Spending



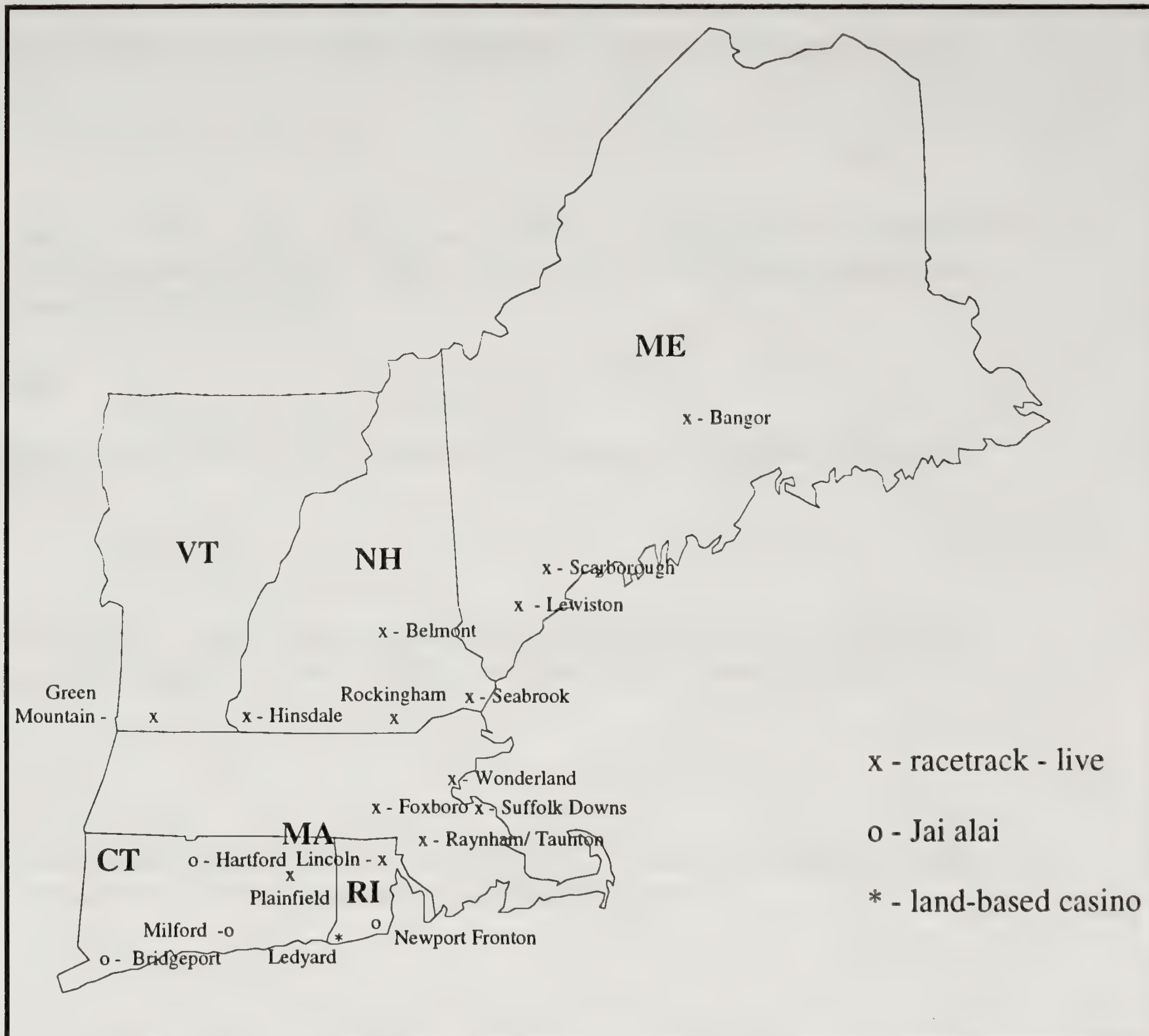
Source: State Lottery Commissions, Rand McNally Commercial Atlas.

A. Overview of the New England Gaming and Wagering

Pari-Mutuel

There are a total of 15 race tracks and 4 Jai alai frontons in New England. Connecticut has the only land-based casino. Most of the tracks are located near major metropolitan areas or state borders. Overall, pari-mutuel wagering has been in decline during the last few years. Some states, such as Vermont, have seen a downward trend since the early 1980s. Detailed statistics were not available for all states, but have been included for those possible.

PARI-MUTUEL GAMING LOCATIONS



Source: State Racing Commissions

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B. Connecticut Gaming and Wagering

Overview

There are 5 types of legal gaming and wagering products in the state of Connecticut: Lotteries, Racing, Jai Alai, Charitable Gaming and a Land-based Casino.

Lottery

Weekly lottery drawings were first introduced in 1971. Daily games began in 1976. This contributed 50-60% of total sales until 1986, when the super jackpot Lotto became the biggest selling game. Unlike other New England states, instant tickets have never accounted for more than 25% of sales.

Pari-Mutuel Racing and Jai Alai

There is one greyhound race track and three Jai Alai facilities in Connecticut. Attendance and revenues are split relatively evenly between the four parks.

Charitable Gaming

Charitable gaming includes Bingo, Raffles and Las Vegas Casino Nights. Bingo revenues have been growing an average of 7% per year since 1989 reaching $30 million in sales in 1992. The other games raised $28 million in revenues.

Land-based Casino

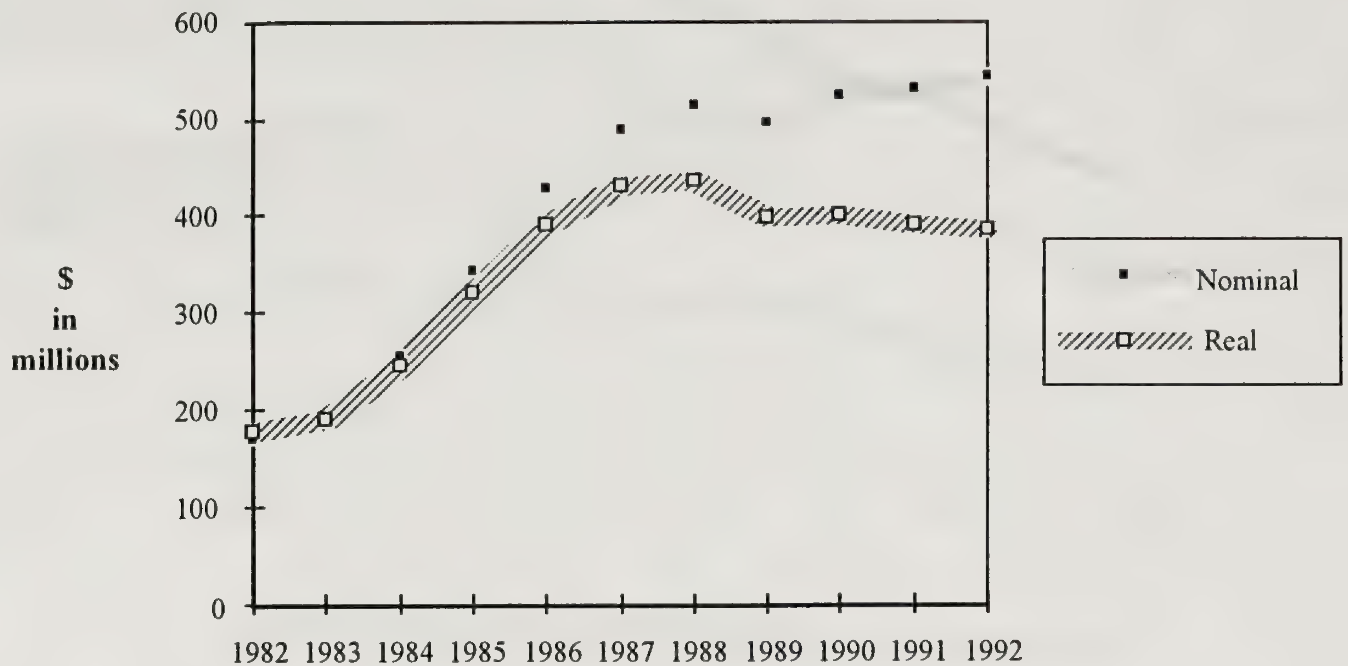
Connecticut has the first land-based casino in New England. The Foxwood Casino, located in Ledyard, CT, opened in 1990. This casino has been built and is operated by a Native American Indian Reservation.

B. Connecticut Gaming and Wagering

Lottery

Connecticut's lottery grew an average of 28% from 1983-1987. Total sales reached $490 million in 1987. Since then sales have remained steady and growth has been minimal at 2% per year. In 1992, per capita spending was the still the second highest in New England, after Massachusetts.

Conneticut Lottery Sales



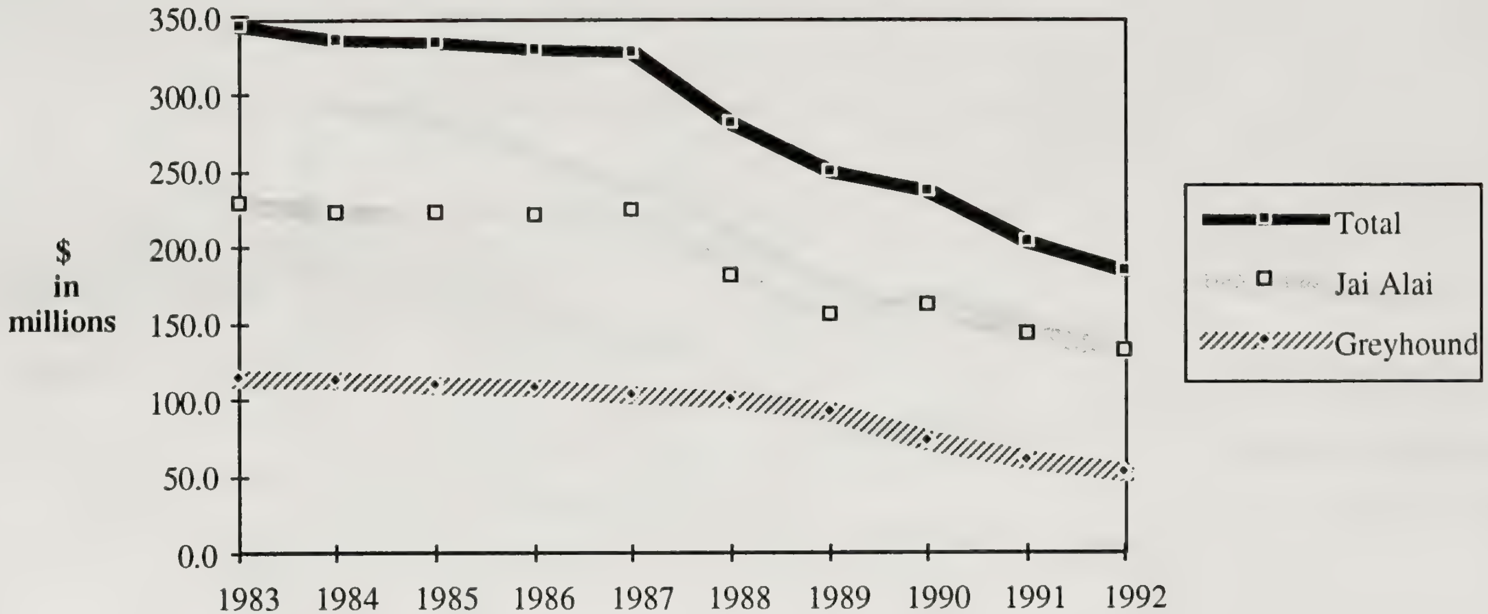
Source: Connecticut Lottery Commission
Note: Nominal Dollars Deflated to 1983 Dollars Using the Consumer Price Index

B. Connecticut Gaming and Wagering

Pari-Mutuel

Real revenues were very steady from 1983-1987, despite a drop in attendance. Greyhound's revenues fell just 2.6% and Jai Alai's only .5%. 1987 saw the start of a steady revenue decline, averaging -12.8% growth for greyhounds and -10% growth for Jai Alai.

Connecticut Pari-Mutuel Real Handle



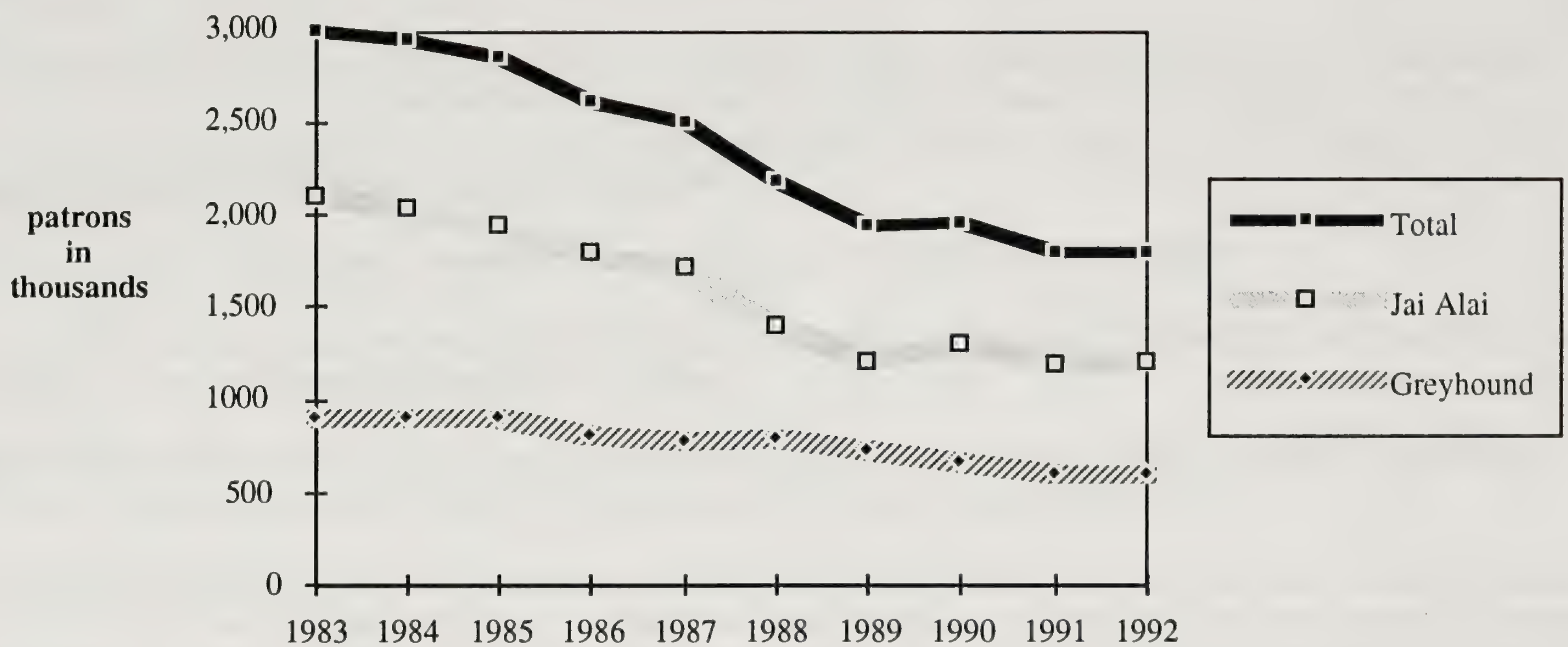
Source: Conneticut Department of Special Revenues.
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

B. Connecticut Gaming and Wagering

Pari-Mutuel

Attendance at Plainfield greyhound racetrack fell 3.5% from 1983 to 1987, while at the Jai Alai fronton it fell 5% during the same period. This downward trend continued until 1990, when attendance leveled off.

Connecticut Pari-Mutuel Attendance



Source: Conneticut Department of Special Revenues.

B. Connecticut Gaming and Wagering

Foxwood Casino

The Meshantucket Indians opened the Foxwood Casino in February 1992. Based in Ledyard, CT, it is the first casino in New England to be opened under the Indian Gaming Act of 1988.

- As of 1992, Indian tribes operated approximately 40 full-fledged casinos in 12 states. When including bingo and blackjack, over 50% of the nation's 314 tribes run some form of gaming operation.

- The casino employs approximately 3,500 individuals and averages 10,000 - 15,000 visitors per week. The initial investment was $58 million, though a $184 million expansion is currently underway to expand the casino and build a resort.

In an effort to maximize state revenue from this tax-free venture, the state entered into a unique agreement in January 1993 with the casino granting them exclusive rights to have slot machines in Connecticut. In exchange the tribe guaranteed $130 million in taxes for the first two fiscal years. Because of this arrangement, gross revenue from slot machines must be reported, but all other financials are private.

- Total win from the slot machines between January 16 and July 18, 1993 was $96,932,000.

- Industry experts estimate total revenues from the first fiscal year to be between $110 and $150 million. This year's revenue is estimated at between $250 and $500 million.

- Industry experts estimate the Indian gaming market in the U.S. at $5.4 billion in 1992. While this is less than 2% of the total gaming and wagering industry, it is considered the fastest growing segment.

Several issues related to infrastructure have been raised. Local traffic often comes to a standstill as the small two-lane highway is insufficient for the volumes of visitors. In addition, local residents are concerned over the amount of property the tribe is purchasing. Since the casino/resort revenues are tax-exempt, local officials are concerned about the lack of resources to support local infrastructure and services.

C. Rhode Island Gaming and Wagering

Overview

The Rhode Island gaming market is diverse, especially relative to its population size of only 1 million. There are 4 types of legal gaming and wagering products in Rhode Island:

- Lotteries
- Pari-Mutuel Racing and Jai Alai
- Video Lottery Terminals
- Charitable Gaming

Lottery

The Rhode Island Lottery was started in 1974. Unlike other states, the daily numbers are consistently the top revenue generator. Rhode Island also maintains a game available on-line or by mail, Lot-O-Bucks. In 1988, Rhode Island joined the trend of multi-state lotteries with Lotto America and then Power Ball in 1992. Despite these super jackpot games, Rhode Island has the second lowest per capita spending on the lottery.

Pari-Mutuel Racing and Jai Alai

Rhode Island has one greyhound park and one Jai Alai fronton. Data on their performance was unavailable.

Video Lottery

Video poker terminals are only available at pari-mutuel facilities. According to lottery officials, they have been very successful.

Charitable Gaming

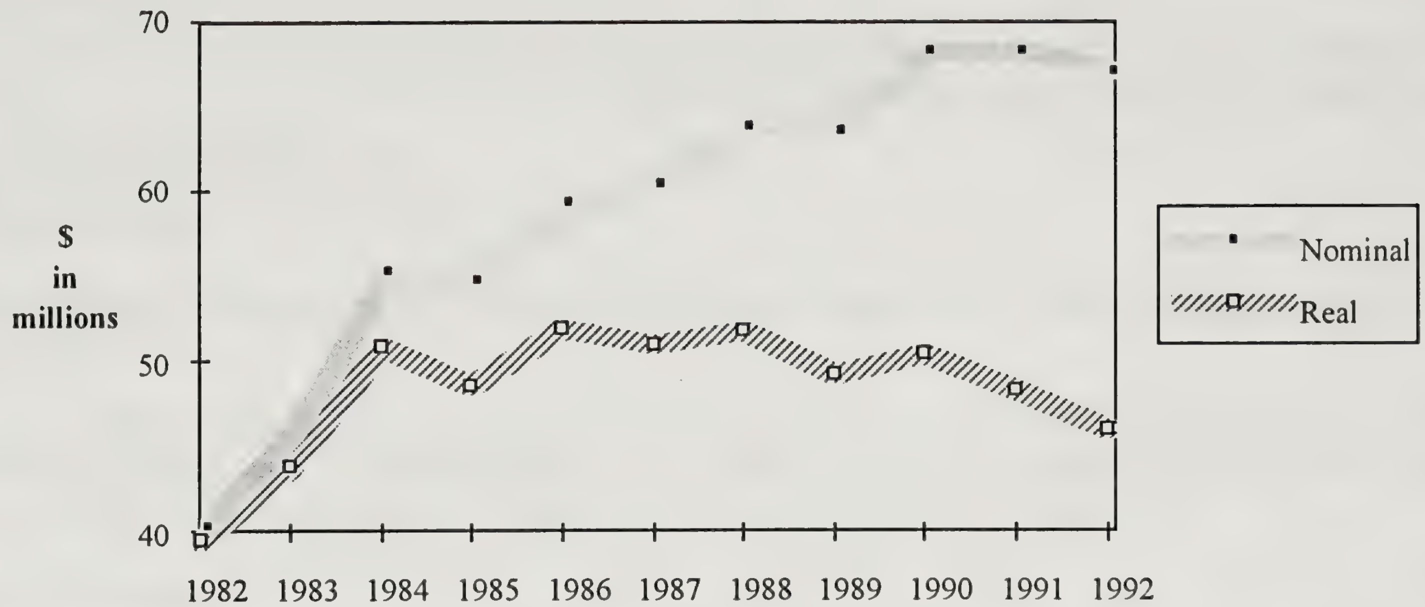
Bingo and Raffles are available. They are regulated by the State Police and no revenue figures are reported.

C. Rhode Island Gaming and Wagering

Lottery

Real lottery sales have been flat in Rhode Island since 1987, declining at 2% per year from 1987-92. Total nominal sales reached $65 million in 1992.

Rhode Island Lottery Sales



Source: Rhode Island Lottery Commission
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

D. New Hampshire Gaming and Wagering

Overview

New Hampshire's legal gaming products include the lottery, pari-mutuel racing, both live and simulcast, as well as charitable gaming.

Lottery

The state of New Hampshire was the first in the country to introduce a state lottery, in 1963. Its objective was to fund education and still today, lottery revenues go entirely to state education. New Hampshire has occasionally linked its lottery and racing by offering sweepstakes tickets, whose winners were determined by certain horse or hound races.

Another first in New Hampshire came in 1985 when Megabucks was launched among the tri-states: Maine, New Hampshire and Vermont. The early 1990s saw the introduction of games with larger jackpots and single lump-sum payments which kept sales high.

Pari-Mutuel Racing

Thoroughbred racing was inaugurated in 1933 and ran continuously until 1981. It was then suspended for 2 years, before re-starting in 1984.

Greyhound racing began in 1973 and harness racing occurs at state fairs. Total racing days per year have hovered at just under 1000 since 1987, with 70% attributable to greyhounds. This figure dropped in 1992, primarily due to the commencement of simulcast wagering which significantly decreased attendance at the races.

Charitable Gaming

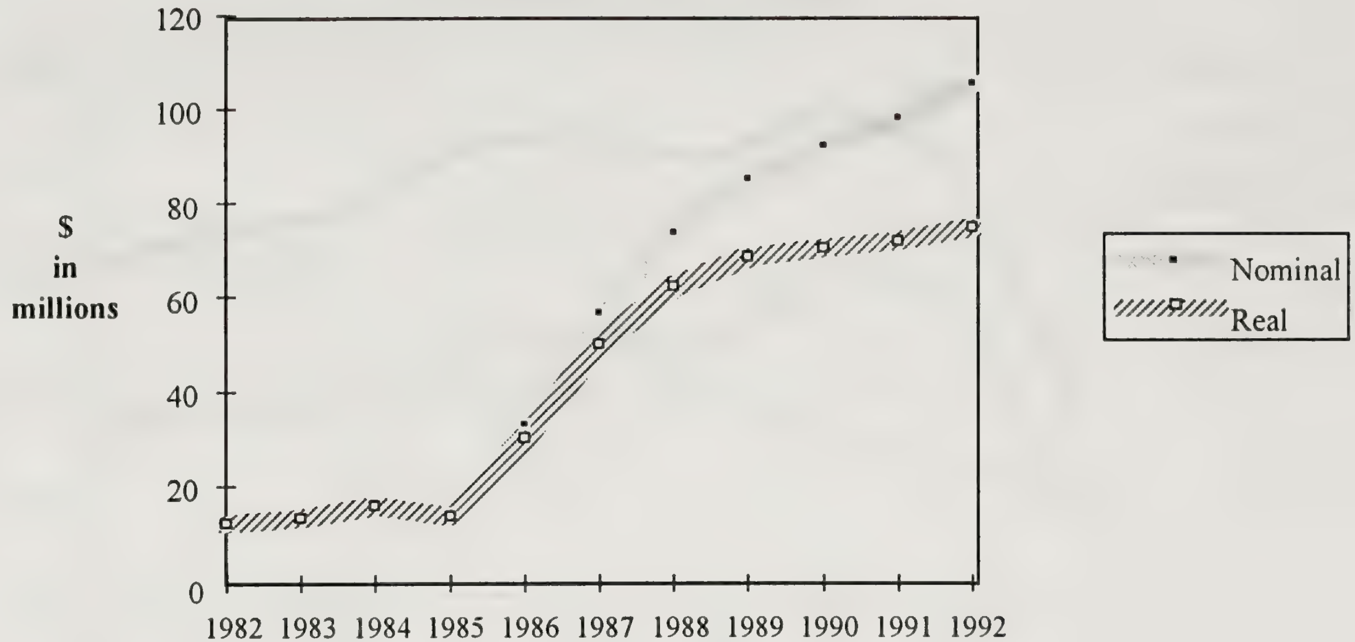
The Department of Safety regulates charitable gaming. Bingo revenues in 1991 were $34 million and revenues for other games such as raffles and casino nights were $43 million.

D. New Hampshire Gaming and Wagering

Lottery

Unlike other New England states whose sales growth has been erratic, New Hampshire lottery sales having grown at a steady but slower pace since the mid-1980s. The real growth rate declined from 17% in 1987-1989 to 3.2% in the early 1990s. Total sales in 1992 reached $106 million. Instant games, launched in 1975, currently contribute approximately 50% of total revenues.

New Hampshire Lottery Sales



Source: New Hampshire Lottery Commission

Notes: (1) Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index.

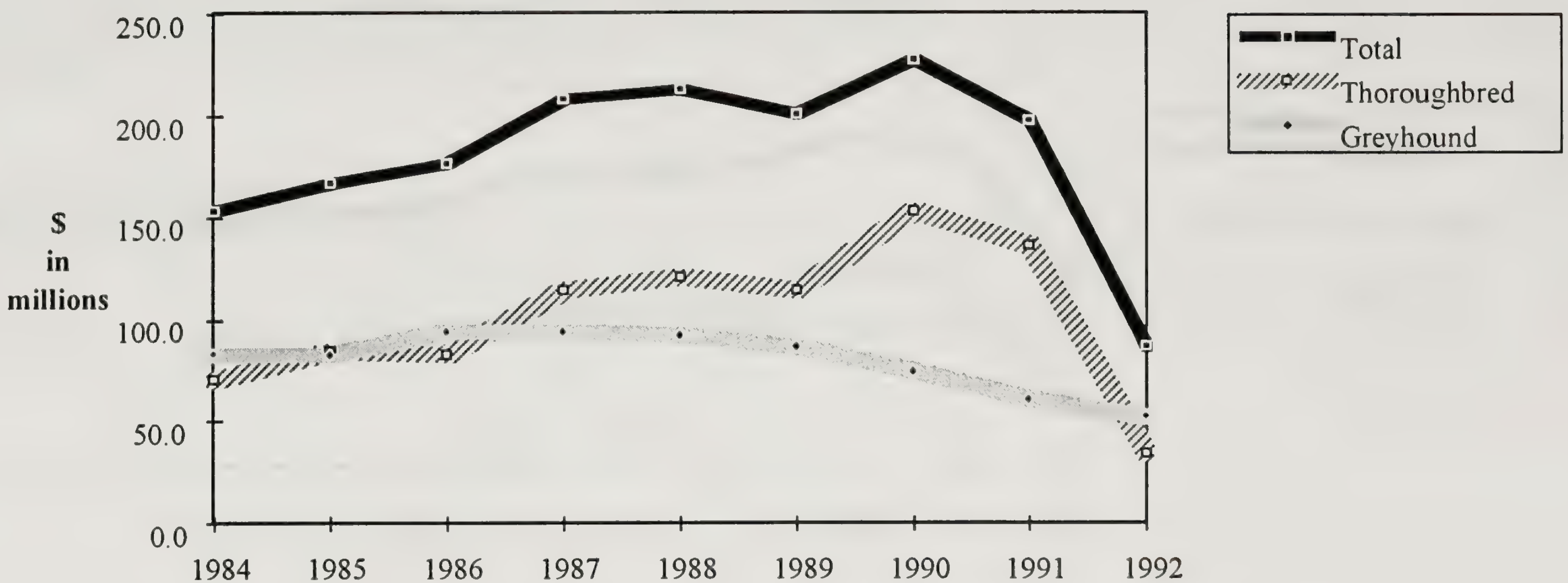
(2) These figures include the Bingo/Lucky 7 Games run by the Lottery Commission. They contribute about 2% of total lottery revenues.

D. New Hampshire Gaming and Wagering

Pari-Mutuel

Since the re-start of thoroughbred racing, sales revenues have been fairly erratic. Real sales growth was 40% from 1989 through 1990, only to fall by 9% in 1991. Greyhound racing on the other hand has seen a steady decline in revenues since 1986 of 9% per year.

New Hampshire Pari-Mutuel Handle



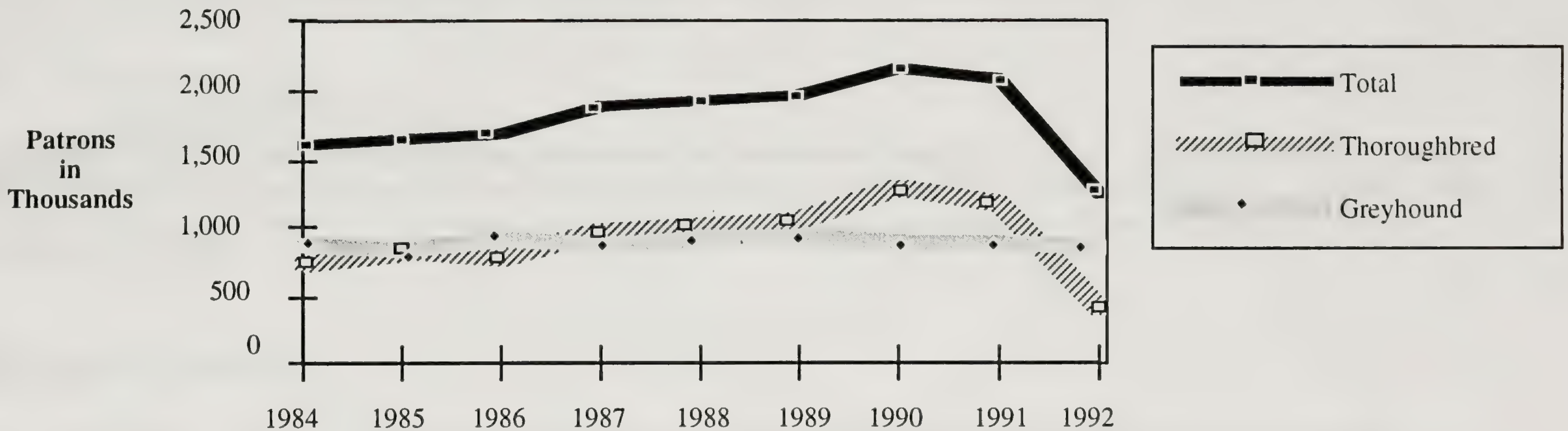
Source: New Hampshire Racing Commission
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

D. New Hampshire Gaming and Wagering

Pari-Mutuel

Total racing attendance rose steadily until 1990. There was a significant decline in 1992 of about 50%.

New Hampshire Pari-Mutuel Attendance



Source: New Hampshire Lottery Commission
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index.

E. Vermont Gaming and Wagering

Overview

There are 3 types of legal gaming and wagering in Vermont: lotteries, pari-mutuel racing, and charitable gaming.

Lottery

The Vermont Lottery began in 1978. As with many other New England states, the instant games have been the most successful, generating 55-60% of total revenues. In 1985 Megabucks, the first multi-state lottery, was launched. Total per capita wagering volumes have remained lower than other states, possibly due to a lack of super jackpot games.

Pari-Mutuel Racing

Greyhound racing has seen a steady decline in revenues and attendance from 1982 to 1987. This is partly attributable to a decline in the number of days raced in the state, which fell from an average of 157 from 1982 to 1985, to 100 in 1986 to 1987. Spending per patron has remained constant at about $70 during this period. (Data on racing was only available through 1987.)

Charitable Gaming

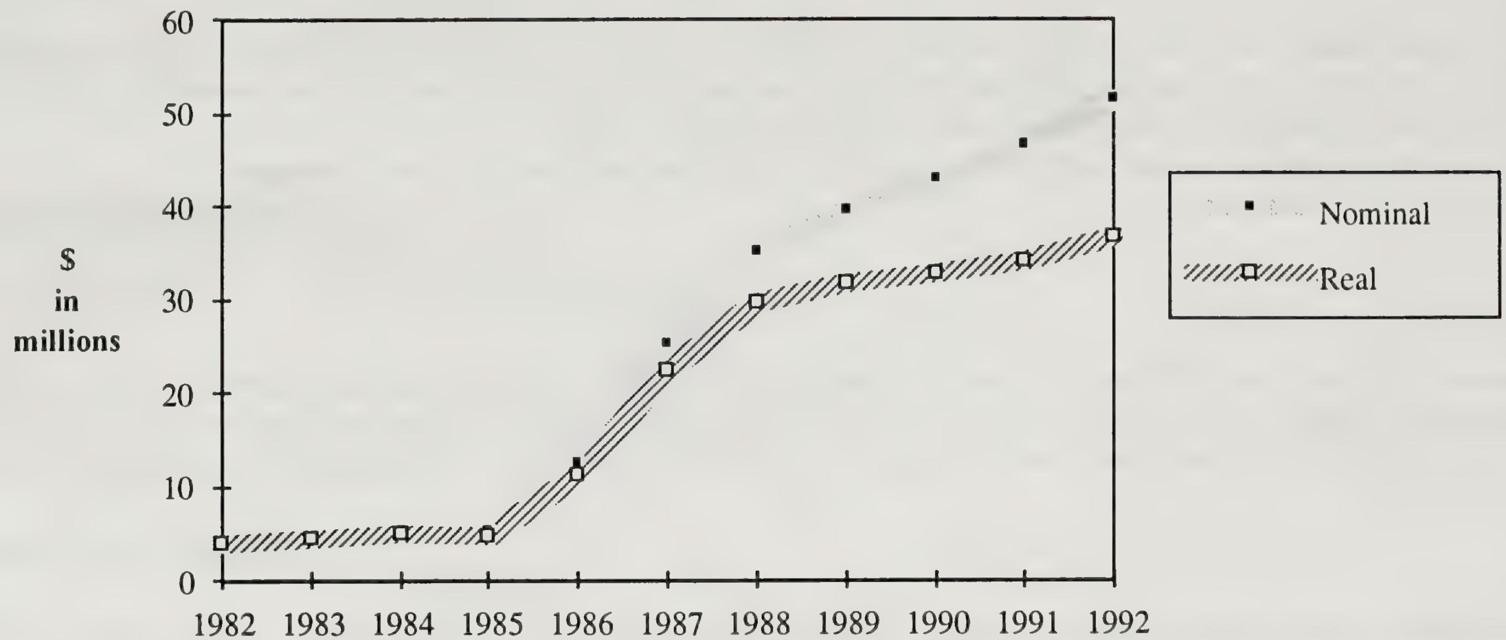
Bingo, raffles and Las Vegas nights are all available, but charity organizations are not required to report revenues.

E. Vermont Gaming and Wagering

Lottery

Lottery sales grew dramatically in the mid 1980s, with real revenues growing an average of 85% per year from 1985 through 1988. While sales have slowed since, growth has remained steady at 5.5% per year. The total market is the smallest in New England, reaching $50 million for the first time in 1992.

Vermont Lottery Sales



Source: Vermont Lottery Commission
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

F. Maine Gaming and Wagering

Overview

The state of Maine offers 4 types of legal gaming and wagering products: Lotteries, Pari-Mutuel Racing, High Stakes Bingo, and Charitable Gaming.

Lottery

The Maine Lottery was introduced in 1974 with an instant game. The lottery has subsequently grown to six games, though instant sales still account for 40-50% of total lottery sales in the 1990s.

In 1985 Megabucks, the first multi-state game was launched comprising Maine, Vermont and New Hampshire. This pooling of resources generated much larger potential winnings and has been particularly successful. Megabucks has accounted for 35-40% of total lottery sales in the 1990s. Lotto America, a seven-state game, was introduced in 1991. However, in 1992, CASH 5 replaced Maine's participation in Lotto America. The fixed weekly cash jackpot of CASH 5 is a distinctive and popular feature.

Pari-Mutuel Racing

Harness racing revenues grew at a steady rate in the mid-1980's. There is a total of about 330 days raced in Maine per year. Scarborough Downs is the main track, open for racing 120-125 days per year. Lewiston Raceway operates about 90 days and Bass Park about 45. The remaining days are from fairs. (Racing data only available through 1987.)

Native American Bingo

High Stakes Bingo type games are played on certain Indian reservations in Maine. These games operate under the Indian Gaming Regulatory Act iof 1988.

Charitable Gaming

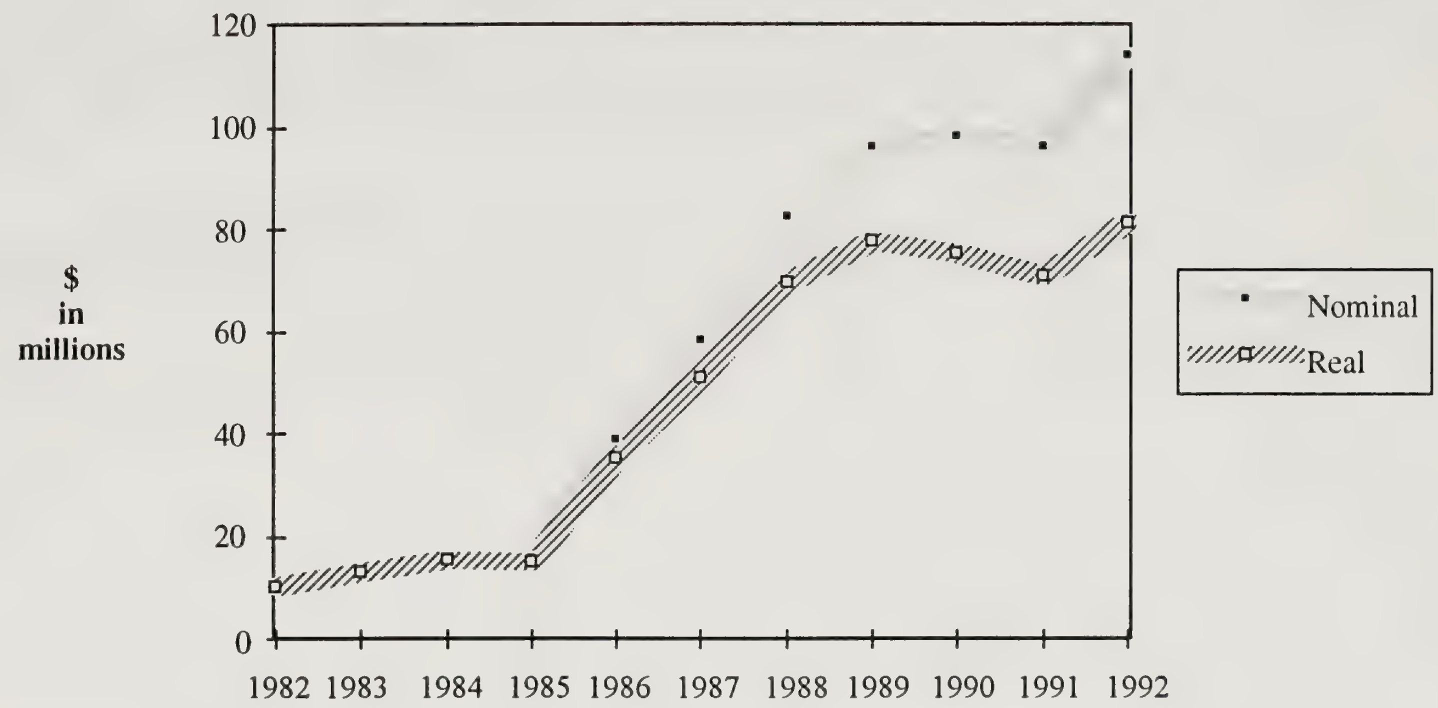
All types of charitable gaming are legal though organizations are not required to report revenues.

F. Maine Gaming and Wagering

Lottery

After rapid real revenue growth of 52% per year from 1985 through 1989, lottery sales stabilized from 1989 through 1991 at just under $100 million/year. The introduction of new products, with significant sizable jackpots, in 1991 and again in 1992 helped fuel a 18% growth in sales in 1992.

Maine Lottery Sales



Source: Maine Lottery Commission
Notes: Nominal Dollars deflated to 1983 Dollars using the Consumer Price Index

IV. Water-based Gaming Market Potential

A. Other Water-based Gaming Operations

The US water-based gaming industry is currently experiencing dramatic growth. Since Iowa first legalized riverboat gaming on the Mississippi River in 1989, five other states have enacted similar legislation. Currently, only three states, Iowa, Illinois, and Mississippi have floating casinos in operation. Mississippi has chosen to institute dockside gaming, which is in many ways more similar to land-based casinos than riverboat casinos. Dockside gaming is different from Riverboat gaming in that facilities typically operate 24 hours per day, patrons pay an admission fee, patrons may arrive and depart at any time, and no betting or loss limits exist.

Many states are considering water-based gaming legislation. Those which could be confirmed are listed below.

State	Considering Legislation	Enacted Legislation	Established Operations
Illinois			√
Iowa			√
Mississippi			√
Missouri		√	
Louisiana		√	
Indiana		√	
Massachusetts	√		
Texas	√		
Alabama	√		

Source: Interview with International Gaming and Wagering Business magazine.

A. Other Water-based Gaming Operations

Riverboat Gaming Operating Characteristics

State	Date Implemented	No. of Boats Operating	Projected Annual Attendance	Projected Annual Adjusted Gross Revenues (Millions)	Limitations				Fees	
					Boats	Licenses	Cruises	Betting	State	Local
Iowa	April 1991	4	1,543,991	$46.0	Historic boats. 500 passenger minimum capacity. 30% of sq. footage devoted to gaming.	None. Local approval required.	3 hours during warm season. Dockside during cold season.	$5 betting limit and $200 loss limit per passenger per cruise.	Escalating up to 20% of Adjusted Gross Revenue (AGR).	$0.50 per passenger.
Illinois	Sept. 1991	6	6,612,514	$408.3	500 passenger minimum. Maximum 1,200 gaming positions.	10. None in Cook or Lake Counties.	Maximum of 4 hours.	None.	20% of AGR.	N/A
Mississippi	August 1992	6	NA	NA	Minimum of 150 ft. in length and 200 passenger capacity.	None. Local approval required.	None. Dockside on barges.	None.	Escalating up to 8% of AGR.	4% of AGR, varies by location.
Louisiana	NA	0	NA	NA	Historic boats, maximum gaming space of 30,000 sq. ft. or 60% of total space whichever is less. Minimum capacity of 600 passengers.	15. No more than 6 in any one parish.	Minimum of 3 hours, maximum of 8 hours.	None.	15% of AGR.	$2.50 per passenger
Missouri	NA	0	NA	NA	Historic boats, maximum gaming space of 50% of total space. Minimum dining space of 20% of total space. 500 passenger minimum capacity.	None. Local approval required.	Cruises during warm season. Dockside during cold season. Some dockside year round in St. Louis.	$500 loss limit per passenger per cruise.	Escalating up to 20% of AGR.	Varies by location.
Indiana	NA	0	NA	NA	Ohio River boats must be historic.	11.	None.	None.	2% of AGR	Varies by location.

Source: Interviews with various state gaming commissions industry sources.

A. Other Water-based Gaming Operations

Riverboat Gaming Operations in Illinois

Illinois currently has 6 operating vessels. There is a limit of 10 operating licenses and each vessel must have a minimum 500 passenger capacity, and no more than 1,200 gaming positions. There are no limitations on betting or losses.

Boat	Date Opened	Capacity (patrons)	Annual Hours of Operation (hours)	Attendance YTD(1) (patrons)	Adjusted Gross Revenues YTD(1) (millions)	Annualized 1993 Attendance(2) (patrons)	Annualized 1993 Adjusted Gross Revenues(2) (millions)	Adjusted Gross Revenues per Patron
Alton Belle Casino Alton, IL	9/10/91	1,321	4,680	324,188	$22.0	778,051	$52.8	$67.81
Casino Rock Island Rock Island, IL	3/10/92	900	4,680	362,714	$16.0	870,514	$38.4	$44.08
Par-a-dice Peoria, IL	11/20/91	1,100	3,575	448,555	$24.5	1,076,532	$58.8	$54.63
Jo Davies Galena, IL	6/18/92	1,000	5,616	321,816	$12.6	772,358	$30.2	$39.05
Empress Joliet, IL	6/17/92	1,000	4,680	808,509	$71.9	1,940,422	$172.6	$88.95
Players Riverboat Casino Metropolis, IL	2/23/93	1,200	5,772	318,131	$15.1	1,174,638	$55.6	$47.34
Total				**2,583,913**	**$162.0**	**6,612,514**	**$408.3**	**$62.70**

Source: Illinois Gaming Commission
Notes: (1) Year to date figures through May 1993.
(2) Annualized based on year to date figures.

A. Other Water-based Gaming Operations

Riverboat Gaming Fee Structure in Illinois

The state gaming fee is a fixed rate of 20% of Adjusted Gross Revenues. There is also a $2 state fee per patron. The Illinois basic sales tax on retail and food and beverage purchases is 6.25% (5% to the state, 1.25% to localities). Certain cities are also permitted to charge an additional, local sales tax at a rate of 0.25% or more. Alton, Joliet, Peoria, and Rock Island have instituted these taxes, bringing their sales tax rates to 7.00%, 7.25%, 7.25%, and 6.75%, respectively.

Boat	Date Opened	Adjusted Gross Revenues YTD(1) (millions)	Direct State Fees YTD(1) (millions)	Direct Local Fees YTD(1) (millions)	Annualized 1993 Adjusted Gross Revenues(2) (millions)	Annualized 1993 Direct State Fees(2) (millions)	Annualized 1993 Direct Local Fees(2) (millions)	Effective Fee Rate
Alton Belle Casino Alton, IL	9/10/91	$22.0	$3.6	$1.4	$52.8	$8.7	$3.4	22.9%
Casino Rock Island Rock Island, IL	3/10/92	$16.0	$2.8	$1.2	$38.4	$6.6	$2.8	24.5%
Par-a-dice Peoria, IL	11/20/91	$24.5	$4.1	$1.7	$58.8	$9.9	$4.0	23.7%
Jo Davies Galena, IL	6/18/92	$12.6	$2.2	$1.0	$30.2	$5.3	$2.3	25.1%
Empress Joliet, IL	6/17/92	$71.9	$11.6	$4.4	$172.6	$27.8	$10.6	22.2%
Players Riverboat Casino Metropolis, IL	2/23/93	$15.1	$2.6	$1.1	$55.6	$9.5	$3.9	24.2%
Total		**$162.0**	**$26.9**	**$10.7**	**$408.3**	**$67.8**	**$27.0**	**23.2%**

Source: Illinois Gaming Commission
Notes:: (1) Year to date figures through May 1993.
(2) Annualized based on year to date figures.

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A. Other Water-based Gaming Operations

Riverboat Gaming Operations in Iowa

Iowa has had 6 operating vessels, although only 3 are currently operating in Iowa. Each vessel must have a minimum 500 passenger capacity, and no more than 30% of total square footage devoted to gaming. There is a $5 bet limit, and $200 loss limit per passenger per cruise. Several vessels have ceased operations, reportedly due to poor profitability caused by restrictive betting and loss limits.

Boat	Date Opened	Capacity (patrons)	Annual Hours of Operation (hours)	Attendance YTD(4) (patrons)	Adjusted Gross Revenues YTD(4) (millions)	Annualized 1993 Attendance(5) (patrons)	Annualized 1993 Adjusted Gross Revenues(5) (millions)	Adjusted Gross Revenues Per Patron
Diamond Lady (1) Bettendorf, IA	4/1/91	1,000	4,992	NA	NA	NA	NA	NA
Casino Belle (2) Dubuque IA	4/1/91	2,250	3,900	127,307	$3.9	NA	NA	$30.58
Emerald Lady (3) Ft. Madison, IA	5/10/91	1,000	4,212	NA	NA	NA	NA	NA
Mississippi Belle II Clinton, IA	6/12/91	500	4,056	106,611	$3.7	255,866	$9.0	$35.06
Sioux City Sue Sioux City, IA	1/29/93	600	3,640	74,906	$1.8	219,237	$5.2	$23.65
President Davenport, IA	4/1/91	3,000	5,824	445,370	$13.3	1,068,888	$31.9	$29.83
Total				**754,194**	**$22.7**	**1,543,991**	**$ 46.0**	**$30.08**

Source: Iowa Racing and Gaming Commission
Notes: (1) Ceased operating in Iowa in July 1992.
(2) Ceased operating in Iowa in April 1993.
(3) Ceased operating in Iowa in July 1992.
(4) Year to date figures through May 1993.
(5) Annualized based on year to date figures.

A. Other Water-based Gaming Operations

Riverboat Gaming Fee Structure in Iowa

The state gaming fee is an escalating rate of up to 20% of Adjusted Gross Revenues. There is also a $0.50 state fee per patron. The basic sales tax in Iowa is 5%. In addition, there is a local option sales tax, which has been imposed in Bettendorf, Dubuque, Ft. Madison, Clinton, and Davenport.

Boat	Date Opened	Adjusted Gross Revenues YTD (4) (millions)	Direct State Fees YTD (4) (millions)	Direct Local Fees YTD (4) (millions)	Annualized 1993 Adjusted Gross Revenues (5) (millions)	Annualized 1993 Direct State Fees (5) (millions)	Annualized 1993 Direct Local Fees (5) (millions)	Effective Fee Rate
Diamond Lady (1) Bettendorf, IA	4/1/91	NA	NA	NA	NA	NA	NA	NA
Casino Belle (2) Dubuque IA	4/1/91	$3.9	$0.7	$0.0	NA	NA	NA	20.0%
Emerald Lady Ft. Madison, IA	5/10/91	NA	NA	NA	NA	NA	NA	NA
Mississippi Belle II Clinton, IA	6/12/91	$3.7	$0.7	$0.0	$9.0	$1.7	$0.1	20.4%
Sioux City Sue Sioux City, IA	1/29/93	$1.8	$0.1	$0.0	$5.2	$0.3	$0.1	7.2%
President Davenport, IA	4/1/91	$13.3	$2.7	$0.1	$31.9	$6.4	$0.3	21.1%
Total		**$22.7**	**$4.3**	**$0.2**	**$46.0**	**$8.4**	**$0.5**	**19.7%**

Source: Iowa Racing and Gaming Commission
Notes: (1) Ceased operating in Iowa in July 1992.
(2) Ceased operating in Iowa in April 1993.
(3) Ceased operating in Iowa in July 1992.
(4) Year to date figures through May 1993.
(5) Annualized based on year to date figures.

3-09-006-13b

B. Structure of Operations

The following assumptions were made as to the structure of water-based gaming operations in Massachusetts for the purposes of this study.

Regulatory Environment
Massachusetts will enact enabling legislation as currently proposed which authorizes the Massachusetts Lottery Commission to oversee and regulate the operations of floating casinos.

Building and Development
The sites selected for operations will have the hotel space and necessary transportation to support the levels of attendance and spending described in this study.

Water-based Gaming Operations
For the purposes of this study, each licensee will have a rated capacity of 1,500 passengers per boat (800 to 1,000 as configured for gaming). A cruise schedule will be instituted whereby a cruise vessel provides 4 four hour cruises per day, seven days per week. Each vessel will be operational approximately 325 days per year, allowing for maintenance and inclement weather. This equates to 5,200 hours annually and an annual capacity of 1.04 to 1.3 million patrons per year. These operating characteristics are consistent with established operations in Illinois and Iowa.

Gaming Products
Casino layout will vary somewhat by boat, but will feature a slot machine to table ratios which meet customer demand. Licensed games will include blackjack, poker, Keno, dice, slot machines, video games, and roulette.

Ancillary Services
Each boat will provide food and beverage services to its patrons. In addition, video arcades, gift shops, parking, ticket office, and other services will be provided.

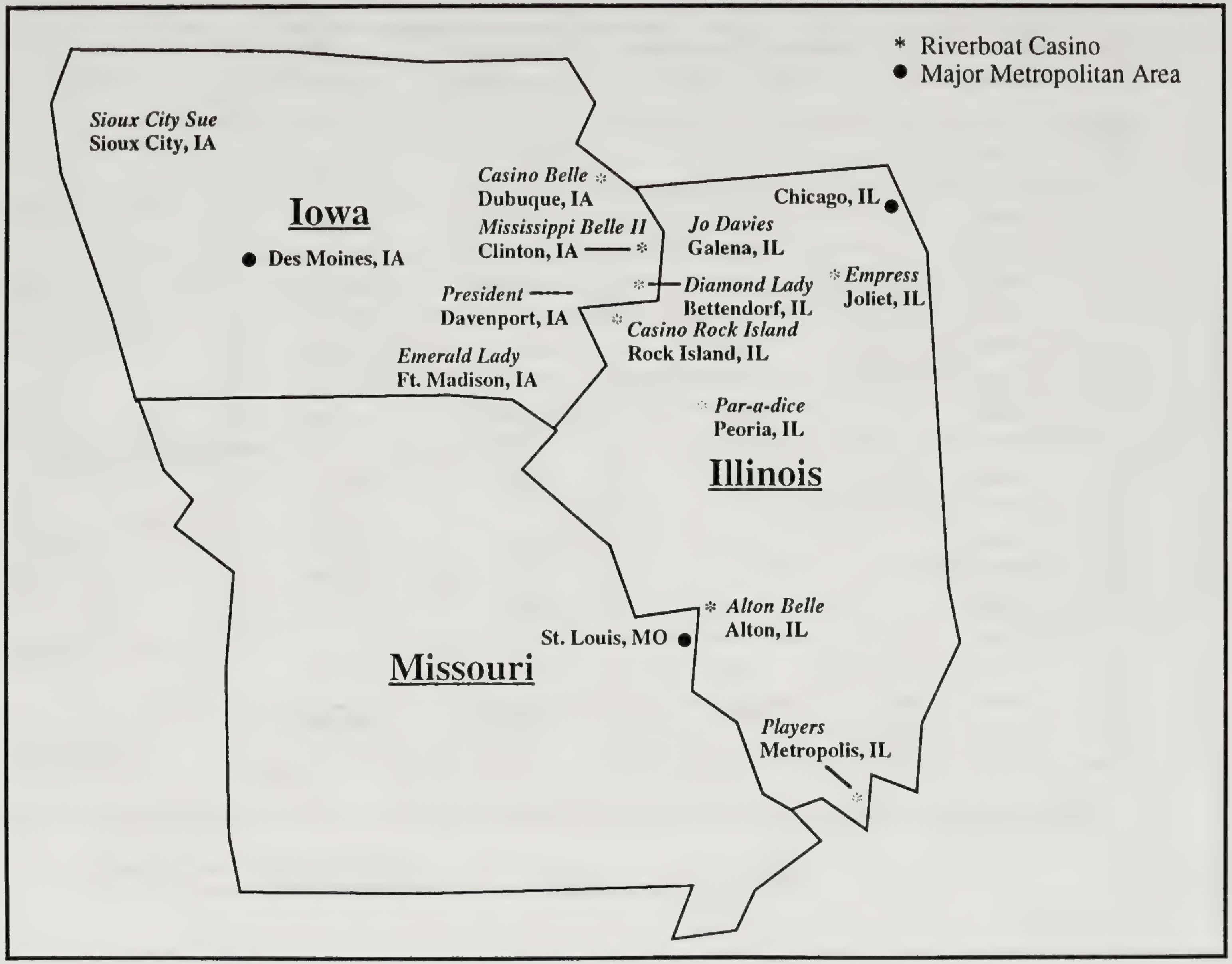
C. Market Potential

In estimating the market potential for water-based gaming in Massachusetts, it is necessary to determine which existing water-based gaming operations, if any, are similar in operations and market demographics. Water-based gaming in Illinois and Iowa were selected because they are currently the only states with established riverboat cruise gaming operations. Mississippi was not selected because it has implemented "dockside gaming", which is substantially different in nature than riverboat cruise gaming. The relative newness of water-based gaming makes estimating market potential difficult due to the small number of suitable comparables and the limited historical data on operations. In addition, Massachusetts is likely to experience different demand patterns due to the proximity of potential sites to major metropolitan areas, the existing level of tourism, and its track record of successfully introducing new gaming and wagering products.

The key indicators of market potential are the ratio of annual attendance to MSA population within 150 miles of the water-based gaming site and adjusted gross revenues per patron. The 150 mile area is a reasonable approximation of the potential target market. Within this area, patrons can drive to the site within 3 hours, making it suitable for day or weekend trips. Adjusted gross revenue per patron indicates the patron spending level which can be expected. These ratios are combined to establish an estimated market potential.

C. Market Potential

The proximity of the riverboats in Illinois and Iowa creates a significant overlap of target population. In aggregate, the nine operating vessels reach a total MSA population within 150 miles of 16.9 million.



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C. Market Potential

Riverboat Gaming Operations in Illinois and Iowa

Boat/ Location	MSA Population	Annualized 1993 Attendance (1)	Annualized 1993 Attendance per MSA Population	Adjusted Gross Revenue per Patron
Alton Belle Casino Alton, IL	3,069,700	778,051	0. 25	67.81
Casino Rock Island Rock Island, IL	1,904,900	870,504	0.46	44.08
Par-a-Dice Peoria, IL	2,890,200	1,076,532	0.37	54.63
Jo Davies Silver Galena, IL	1,605,700	772,358	0.48	39.05
Empress Joliet, IL	9,282,300	1,940,422	0.21	88.95
Players Riverboat Casino Metropolis, IL	5,016,400	1,174,638	0.23	47.34
Mississippi Belle II Clinton, IA	1,904,900	255,866	0.13	35.06
Sioux City Sue Sioux City, IA	741,600	219,237	0.30	23.65
President Davenport,IA	1,704,900	1,068,888	0.63	29.83
Illinois and Iowa Combined (2)	**16,866,400**	**8,156,506**	**0.49**	

Source: Illinois Gaming Board, Iowa Racing and Gaming Commission, 1993 Rand McNally Commercial Altas and Marketing Guide

Notes: (1) Annualized based on year to date figures.
(2) Total MSA population does not equal total of individual locations due to shared MSAs.

C. Market Potential

Based on the aggregate annual attendance to MSA population ratio in Illinois and Iowa of 0.49, the 10.1 million residents within 150 miles of Massachusetts would provide 5.0 million patrons per year. However, other factors, such as proximity to major metropolitan areas such as Boston, existing tourism, and historical patterns of gaming and wagering in Massachusetts and New England, suggest that Massachusetts could experience higher attendance levels. Based on this information, it is estimated that water-based gaming in Massachusetts would provide between **5.0 and 6.0 million patrons per year.** This could be serviced by six to eight vessels with gaming capacity of 800 to 1,000 patrons.

It is assumed that the specific locations for these floating casinos would be chosen in such a manner as to address the entire target market. Depending on the actual sites chosen, individual vessels are likely to experience attendance to MSA population ratios ranging from 0.1 to 0.6, as have those in Illinois and Iowa.

The average Adjusted Gross Revenue per patron in Illinois and Iowa is $62.70 and $30.08, respectively. The difference in these values is largely due to the difference in betting and loss limits. Iowa has instituted a $5 wager limit and $200 loss limit per patron, whereas no betting or loss limits have been instituted in Illinois.

However, given the presence of major metropolitan areas such as Boston, along waterways targeted for water-based gaming, it is possible that Massachusets could generate higher spending levels. This higher level of spending could be expected to be similar to or better than that in Alton and Joliet, which are within 35 miles of St. Louis and Chicago, respectively.

Based on Adjusted Gross Revenue per patron in Alton and Joliet, Massachusetts water-based gaming should have an estimated Adjusted Gross Revenue per patron between $70 and $80. This would provide Adjusted Gross Revenues between **$350 and $480 million**. If Massachusetts institutes restrictions similar to Iowa, or selects sites which are not near major metropolitan areas, these values could be significantly lower.

	Adjusted Gross Revenue Per Patron	Projected Attendance (millions)	Annual Projected Adjusted Gross Revenue (millions)
Low Estimate	$70	5.0	$350.0
High Estimate	$80	6.0	$480.0

This spending would be a recurring impact each year, and includes on-vessel gaming spending only. This does not include other spending, such as admissions, food and beverage, novelties, arcade, and parking. This also does not include off-vessel spending on hotels, restaurants, etc. or spending by vessel employees.

C. Market Potential

Impact of Tourism

The Boston Metropolitan Area has a well developed meetings industry and a wide variety of attractions that bring approximately 26.7 million visitors to the area each year. The introduction of water-based gaming would represent an additonal tourist attraction, and could potentially increase the attractiveness of Boston as a destination for both pleasure and business travelers. At the same time, water-based gaming potentially poses competition to some existing area attractions and businesses.

The extent to which demand for water-based gaming will be comprised of the tourism/visitor population, or the area's resident population, is indeterminate at this time because of the numerous public and business policy issues related to the facilities that are unresolved at this time. However, it is clear that creating a significant level of tourist demand will be possible based on the following factors:

- The extent of joint marketing efforts by the facility's operators and other groups involved in the local tourism industry
- The composition of non-gaming and gaming activities at the facilities
- The regulatory and operational requirements on the facilities
- The market orientation of the facilities
- The integration of water-based gaming into the area's transportation infrastructure.

These issues are beyond the scope of this study. However, a number of quantitative and qualitative observations regarding the potential impact of tourism on water-based gaming in Massachusetts can be made.

C. Market Potential

Impact of Tourism

The degree to which tourism affects attendance at water-based gaming facilities in Illinois and Iowa has not been explicity quantified. Although Iowa does not have a particularly high level of tourism, Illinois does have a vibrant tourism industry.

State	Population (Millions)	Annual Tourism Person-Trips *(1)* (Millions)	Annual Tourism Spending (Billions)
Illinois *(2)*	11.5	50.0	$12.8
Iowa *(3)*	2.8	12.0	$ 2.7
Massachusetts *(4)*	6.0	26.7	$ 7.6

Source: Rand McNally Commercial Atlas and Marketing Guide 1993
State Tourism Boards

Notes: (1) A trip is defined as any travel over 100 miles one way or overnight stay.
(2) Tourism estimates per Illinois Bureau of Travel and Tourism.
(3) Tourism estimates per Iowa Bureau of Travel and Tourism.
(4) Tourism estimates per Massachusetts Bureau of Travel and Tourism.

Information compiled from interviews with representatives of the Illinois and Iowa lotteries indicates that the mix of tourist and local patrons varies by vessel. Estimates for Illinois vessels ranged from 10% to 25%. For Iowa, estimates were up to 10% of total attendance. Factors cited as affecting tourism attendance were proximity to major metropolitan areas and other tourist attractions, as well as the availability of other gaming facilities.

Discussions with representatives of the Travel and Tourism Bureau in Massachusetts and other states indicate that estimating the impact of tourism on water-based gaming is a complex issue requiring extensive primary market research. It is clear, however, that the current level of tourism in Massachusetts, particularly Boston, will attract attendance to water-based gaming. Although not enough data exists to make a precise estimate, the magnitude of tourist volume in Massachusetts does indicate that Massachusetts may be able to generate a higher level of tourist attendance than Illinois and Iowa, based on the factors cited previously. Based on this, it is estimated that Massachusetts will realize a tourism mix between 25% and 35%. Based on the estimated attendance of 5.0 and 6.0 million patrons per year, this would represent 1.25 to 2.10 million tourists annually.

D. Direct Economic Impact

The direct spending on water-based gaming in Massachusetts should be significant. On-vessel spending would be derived from gaming, admissions, food and beverage concessions, novelties and arcade, and parking. The assumptions used in developing an estimate of direct spending are shown below.

Gaming (Casino Win per Patron)

The win per patron was developed using operating statistics on riverboats in Illinois and Iowa. Because the betting and loss limits have a major effect on win per patron, two ranges were developed. If Massachusetts adopts restrictive betting policies similar to Iowa, a win per patron level of $30 to $35 is estimated. If no such limits are imposed, a win per patron similar to that in Illinois of $70 to $80 is estimated.

Admissions

An average admission fee of $8.00 to $10.00 was assumed for each patron. This is consistent with admissions fees charged on vessels in Illinois and Iowa.

Food and Beverage Concessions

Based on historical riverboat data, an average spending of $10.00 to $12.00 per patron was assumed.

Novelties and Arcade

Based on historical riverboat data, spending on novelties and arcade was assumed to be an average of $1.00 to $2.00 per patron.

Parking

It was assumed that the dock facilities associated with the vessel would provide ample parking for the patrons, and a parking fee would be charged. Based on a common average of 3 people per car, and an average fee of $3.00 to $6.00 per car, an average of $1.00 to $2.00 per patron for parking was assumed.

D. Direct Economic Impact

Direct Spending

The level of direct spending experienced at water-based gaming locations varies significantly. Within the estimated range, realized direct spending will be driven by the quality of planning and implementation, particularly with regard to site selection and structure of operations.

	Patrons (millions)	**$ Per Patron**	**Spending (millions)**
Gaming (casino win)	5.0 to 6.0	$70.00 to $80.00	$350.0 to $480.0
Admissions	5.0 to 6.0	$8.00 to $10.00	$40.0 to $60.0
Food And Beverage Concessions	5.0 to 6.0	$10.00 to $12.00	$50.0 to $72.0
Novelties	5.0 to 6.0	$1.00 to $2.00	$5.0 to $12.0
Parking	5.0 to 6.0	$1.00 to $2.00	$5.0 to $12.0
Total	**5.0 to 6.0**	**$90.00 to $106.00**	**$450.0 to $636.0**

D. Direct Economic Impact

Direct Employment

Full-Time Equivalent (FTE) employment was estimated based on direct employment levels at Illinois and Iowa riverboats. An FTE employee is equal to a person working 2,080 hours on an annual basis. This is employment generated by water-based gaming, and includes employment in casino and vessel operations, food and beverage concessions, and parking facilities. It does not include indirect employment associated with support infrastructure such as hotels, restaurants and retail.

	Projected Annual Attendance (Patrons in Millions)	Estimated Direct Employment (1) (FTEs)	FTEs per Million Patrons
Illinois	6.6	4,388	663.6
Iowa	1.5	1,830	1,185.2
Average	4.1	3,109	924.4

Source: (1) Interviews with Illinois and Iowa Gaming Commissions.
Notes: Projections based on annualized year to date figures.

Based on the direct employment generated from riverboats in Illinois and Iowa, the 5.0 to 6.0 million patrons in Massachusetts water-based gaming operations should provide between **4,600 and 5,500 Full Time Equivalent (FTE)** jobs. These jobs can be expected to include both full-time and part-time positions, such as dealers, maintenance workers, food and beverage workers, administrative support positions, as well as middle and upper management positions. Salaries can be expected to range from $15,000 to $75,000 annually.

D. Direct Economic Impact

Direct Fees

Direct fees were estimated based on an assumed riverboat gaming fee structure and the estimated Massachusetts sales tax. These rates were applied to estimated spending by category generated on the vessel. There are 3 types of fees that would be generated from the operation of water-based gaming in Massachusetts.

- Assumed adjusted gross wagering fee of 20%
- Assumed state revenue component of admissions fee of $1.00 per patron
- Estimated state sales tax of 5% on retail purchases

Additional local taxes may be imposed based on the tax structure of the sites selected for water-based gaming. In estimating the tax revenues generated by water-based gaming in Massachusetts, these tax rates were applied to the estimated direct spending.

	Estimated Direct Spending (millions)	Estimated Direct Fees (millions)
Gaming (casino win)	$350.0 to $480.0	$70.0 to $96.0
Admissions	$40.0 to $60.0	$5.0 to $6.0
Food and Beverage	$50.0 to $72.0	$2.5 to $3.6
Novelties	$5.0 to $12.0	$0.3 to $0.6
Parking	$5.0 to $12.0	$0.0 to $0.0
Total	**$450.0 to $636.0**	**$77.8 to $98.2**

D. Direct Economic Impact

Long Term Viability

The long term success of water-based gaming in Massachusetts depends on its planning and implementation. While water-based gaming in Illinois, Iowa, and Mississippi has been generally successful, there have been problems. For example, several vessels have chosen to discontinue operations in Iowa due to the betting and loss limitations and tax structure, and move to other states with more appealing regulatory structure. Accordingly, the long term success of water-based gaming will depend on the structure and regulation of the operations. The level of attendance, wager or loss limits, if any, and fee structure will determine the profitability of the vessels.

This highlights one of the critical issues associated with water-based gaming. The mobility of the operations allows operators to change jurisdictions with relatively low switching costs.

In the long term, the benefits of expanded gaming and wagering may be negated by comparable expansions in nearby states. As more states implement expanded gaming and wagering, the number of patrons from outside Massachusetts attending may decline. Therefore, the critical success factor of these gaming and wagering products will be their integration with the existing tourist attractions as part of the state's tourism strategy.

To the extent that Massachusetts can incorporate water-based gaming and future gaming and wagering initiatives into an overall tourism strategy which builds upon the traditional strengths of historic and coastline attractions, these operations will provide long term economic benefits.

E. Impact on Other Gaming Products

Lottery and Pari-mutuel Racing

In recent years, only the lottery has been introducing new gaming products in Massachusetts. However, the introduction of water-based gaming will expand the supply of legal gaming in Massachusetts. This threatens the lottery's significant share of the Massachusetts gaming and wagering market. It also threatens the Massachusetts pari-mutuel racing, especially horse racing, which is already in decline. Based on experiences in other locations, water-based gaming has had varied effects on lottery sales.

	No. of Floating Casinos	Change in Total Lottery Sales	Change in Pari-Mutuel Handle
Illinois			
1991	2	(0.2%)	(0.3%)
1992	5	4.5%	(3.4%)
Iowa			
1991	5	(6.1%)	(13.5%)(1)
1992	5	(5.2%)	NA(2)

Source: State Lottery Commission
Notes: (1) Decrease partly attributable to Chapter 11 bankruptcy of Prairy Meadows Racetrack
(2) Figures not available at time of study

There are significant structural differences between Massachusetts lottery games and casino games. The present mix of Massachusetts lottery games does not offer the same higher-order gaming stimulations that water-based gaming offers. The act of purchasing lottery tickets is very dissimilar, and the water-based games will not be as accessible as lottery to purchasers. Pari-mutuel racing, however, is more similar to casino gaming in terms of accessibility and patron involvement. It is also likely, however, that a significant portion of demand for water-based gaming will be cannibalized from existing illegal gaming in Massachusetts. Since the size of the Massachusetts illegal gaming industry is unknown, it is impossible to estimate the impact of water-based gaming on illegal gaming.

E. Impact on Other Gaming Products

Summary

The introduction of water-based gaming in Massachusetts will have an immediate impact on existing gaming and wagering products in Massachusetts. There is likely to be an impact on both lottery and pari-mutuel racing demand and spending levels during and after the introduction of water-based gaming. The level of impact, however, is difficult to estimate. This is due to many factors, including the likely impact on illegal gaming which cannot be known with certainty, and the continued growth in lottery sales, which may hide any cannibalization. This is particularly important in Massachusetts, where the lottery has a strong track record of successful new product introductions, to achieve continued growth. Based on these factors, as well as the experiences of Illinois and Iowa, it is estimated that the introduction of water-based gaming in Massachusetts could potentially impact existing lottery sales between 0% to 4%, and pari-mutuel handle between 0% to 7%.

	Sales, Handle (millions)	Potential Change in Sales and Handle (Pct.)	Potential Change in Sales and Handle (millions)	Potential Change in Direct Fees[2] (millions)
Lottery including Keno	$1,932.2	0% to (4%)	$0.0 to ($77.2)	$0.0 to ($23.2)
Pari-mutuel Horse Racing	$182.4	0% to (7%)	$0.0 to ($12.8)	$0.0 to ($0.6)
Pari-mutuel Greyhound Racing	$313.0	0% to (7%)	$0.0 to ($21.9)	$0.0 to ($1.1)
Total	**$2,427.6**		**($0.0) to ($111.9)**	**($0.0) to ($24.9)**

(1) Based on 1992 Lottery sales and projected annual Keno sales of $219 million
(2) Direct fees estimated based on existing Lottery and Racing take-out structures

V. Next Steps

Next Steps

In assessing the potential impact of water-based gaming in Massachusetts, this study has reviewed a variety of markets, gaming products, and related issues. In doing so, several issues have been raised which we believe warrant further investigation and analysis if Massachusetts chooses to move forward with the implementation of water-based gaming..

These include:

Detailed Market Analysis

This study has presented and analyzed detailed historical evidence on the introduction of Keno and water-based gaming. However, the relative newness of these gaming products makes precise estimates for their impact in Massachusetts difficult. Therefore, we suggest that a more detailed market analysis be conducted. This analysis should include detailed demographic analysis, primary research on gaming and wagering spending, analysis of initial Keno sales, and on-site research of competitive sites, particularly Foxwood Casino.

Indirect Economic Benefits

This study has focused on the direct economic impact of water-based gaming in Massachusetts. However, the increased direct spending will also create additional indirect spending as a portion of the money is respent within the local economy. An analysis of the indirect economic benefits associated with water-based gaming in Massachusetts will determine its total impact on the Massachusetts economy in terms of spending, employment, and tax revenues.

Social Impact Analysis

The social impact of water-based gaming in Massachusetts has not been part of this study. Various social issues, such as crime and habitual gambling, have been raised as cause for concern. We suggest a through analysis of these and other social issues be conducted to clarify and understand these important issues. The results of this study can be used in conjunction with this and other studies to proceed with decisions related to implementation.

Next Steps

Location Study

As indicated in this study, the effective planning and implementation of water-based gaming will be critical to its long-term success. One of the key implementation steps will be site selection. In order to ensure proper site selection, a location study should be conducted to evaluate potential sites in terms of overall benefits. This study should include an analysis of local market potential, employment levels, existing tourism, existing commerce, and surrounding infrastructure.

Regulatory Planning

As evidenced by Illinois and Iowa, the regulatory structure imposed on water-based gaming can significantly affect the profitability and long-term viability of the operations. A thorough regulatory planning effort is necessary to ensure that the regulatory structure developed will serve the needs of the patrons, operators, employees, and the state of Massachusetts as a whole.

Licensee Evaluation

The selection of licensees is also a critical step in the implementation of water-based gaming. To ensure the selection of qualified licensees, a well defined licensee evaluation process should be developed. This evaluation should include an analysis of financial stability, a review of existing operations, a review of project plans, and evaluation of overall ability to meet the needs of Massachusetts.

Technology Assessment

In evaluating licensee proposals, it will be important to understand the proposed supporting technologies and systems. A technology assessment should be performed to evaluate these technologies and the experience of other jurisdictions in using them.